

GOVERNMENT OF INDIA

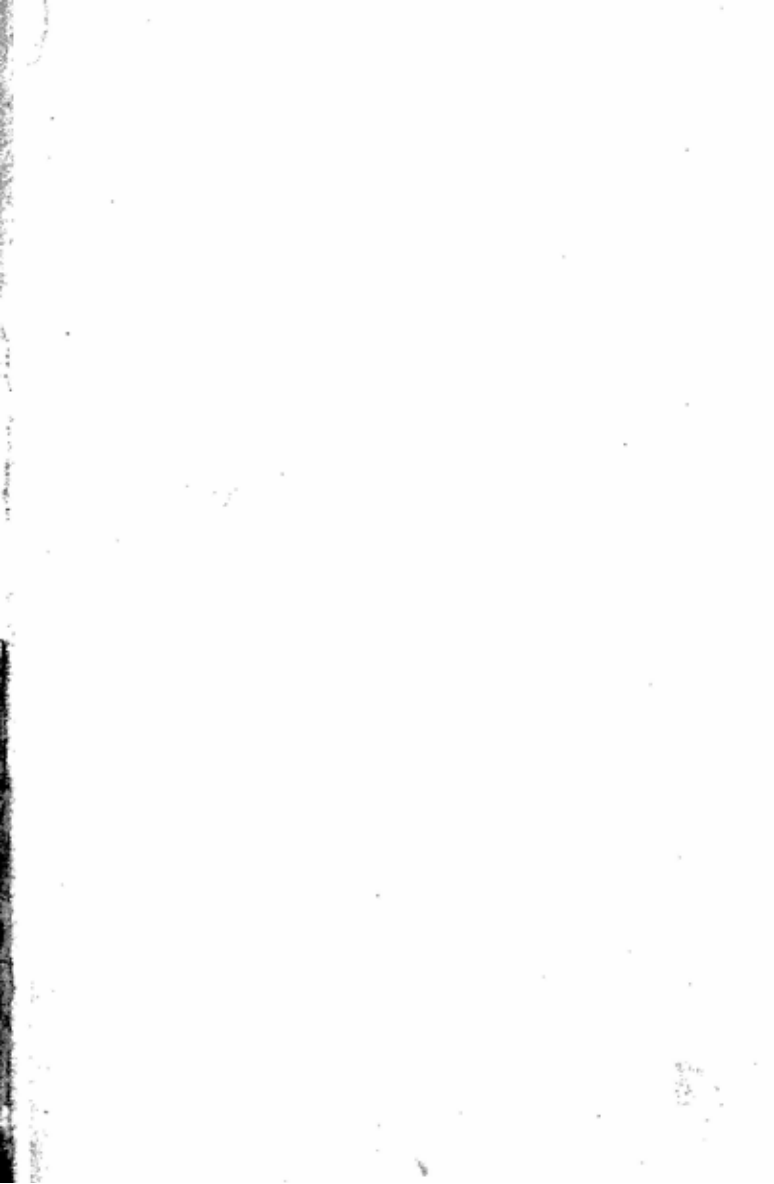
DEPARTMENT OF ARCHAEOLOGY

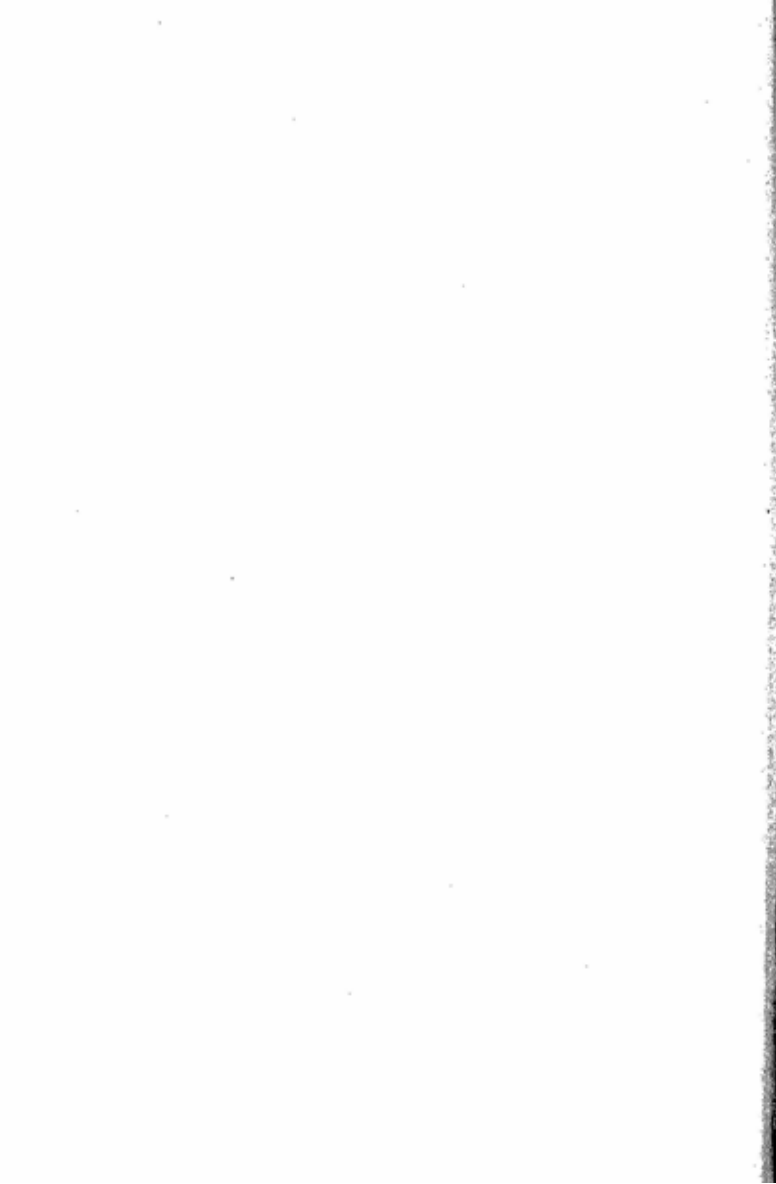
**CENTRAL ARCHAEOLOGICAL
LIBRARY**

6925

CALL NO. 913.427 Boo

D.G.A. 79.

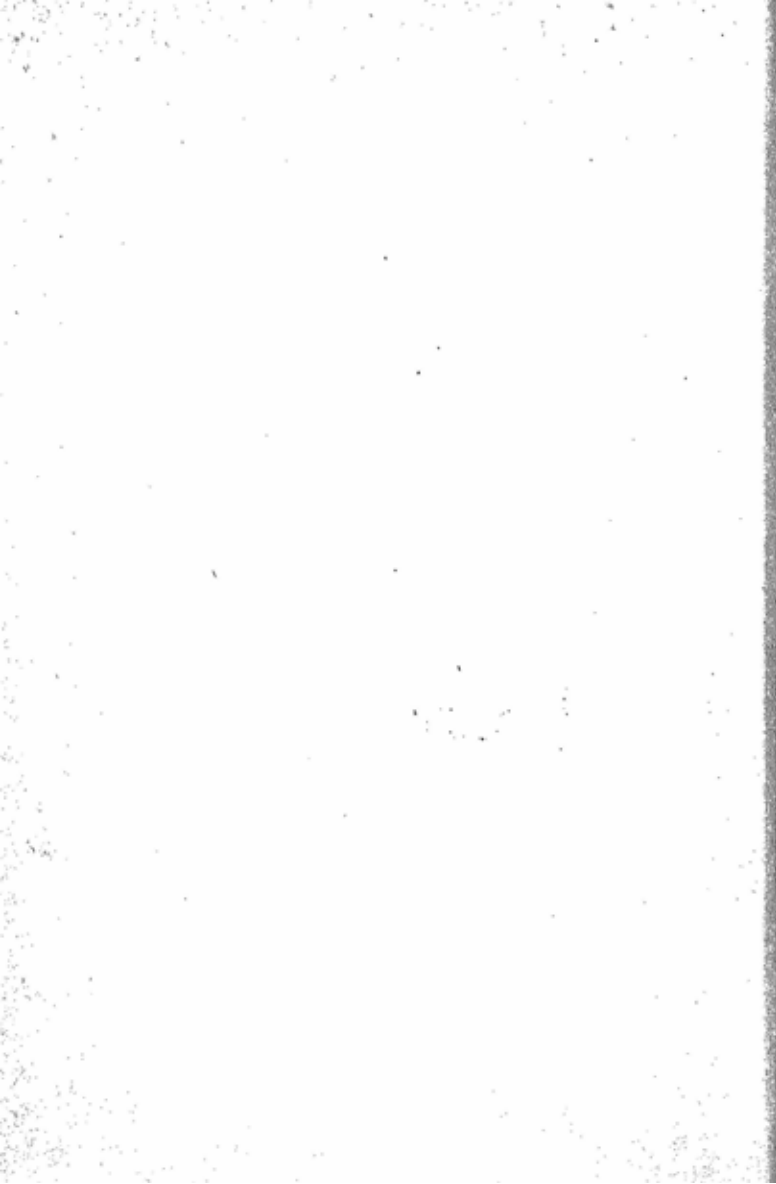




ROMAN SILCHESTER

GENERAL EDITOR

WILFRID J. MILLINGTON SYNGE



ROMAN SILCHESTER

THE ARCHAEOLOGY OF
A ROMANO-BRITISH TOWN

GEORGE C. BOON
B.A. F.S.A.

FOREWORD BY
HIS GRACE THE DUKE OF WELLINGTON
INTRODUCTION BY
MRS M. AYLWIN COTTON

6925

913.427
Boo



MAX PARRISH · LONDON

MAX PARRISH AND CO LTD
55 QUEEN ANNE STREET, LONDON W1
FIRST PUBLISHED 1957

CENTRAL ARCHAEOLOGICAL
LIBRARY, NEW DEPT.
Acc. No. 6925.
Date 16/12/57.
Call No. 913.427/Bor.

PRINTED IN GREAT BRITAIN BY
FLETCHER AND SON LTD NORWICH AND
THE LEIGHTON-STRAKER BOOKBINDING CO LTD LONDON

Foreword

His Grace the Duke of Wellington, K.G., F.S.A.

I have myself known the site of the Silchester excavations for more than fifty years, and I well remember being shown the work in progress by Mr W. H. St John Hope and Mr G. E. Fox in the early years of the present century. At that time, the remains of the Forum and Basilica were still exposed though much disintegrated from the condition in which they were found by Mr Joyce, who had uncovered them at the instance and expense of the 2nd Duke of Wellington forty years before. To prevent further deterioration, the remains were again covered in at the urgent recommendation of Mr Fox. In view of these circumstances, it was hardly fair of the late Professor Haverfield to say that the annual filling in of the excavations was due to the cupidity of the local landowner. This is not the only instance where the owners of the site have been rather unfairly attacked by archaeologists. Recently Mrs J. B. Priestley, writing under the name of Jacquetta Hawkes, drew a melancholy picture of the tyrannical owner of the land trying to bar access to it by the public. In fact, there is a well-defined and recognized right of way across the site starting from the graveyard of St Mary's Church, and all the landlord did was to stop people from crossing an adjoining farmyard. This book will, I hope, show that the owners of the soil have not been obstructive.

During the 18th century, the Manor of Silchester passed in indirect succession to a number of Irishmen, the last of whom was Thomas Pakenham, 2nd Earl of Longford, who was also Lord Silchester. From him, who by mere coincidence was a nephew of the 1st Duchess of Wellington, born Pakenham, the manor was bought by the Parliamentary Trustees to add to the neighbouring Wellington Estate at Stratfield Saye. The deeds acquired with the Manor include the first plan of the walls, dated 1653, as is mentioned by Mr Boon.

Received from Mrs Metropolitan Bank Co., Delhi on 16/12/67 - Price 25 sh.

This account of the Silchester excavations and what they have revealed is long overdue. The diaries of Mr Joyce have never been published, though accounts of the various 'digs' at widely distant dates may be found in old volumes of *Archaeologia*. Now, at last, they are epitomized in convenient and readable form. The picture of life in a remote settlement of the Roman Empire disclosed by the excavations and the 'finds' is a singularly complete one, and this book will commend itself equally to those who already know Silchester and to those who are approaching for the first time both Roman Britain in general and Silchester in particular.

WELLINGTON

Contents

INTRODUCTION by Mrs M. Aylwin Cotton	15
1 SILCHESTER AND ITS EXPLORATION	26
Silchester in the Middle Ages – the Wall and the streets – the first excavations – the ancient name of Silchester – 19th-century explorations – modern excavations – the Silchester Collection	
2 THE BELGIC SETTLEMENT	43
The Atrebrates – the foundation of Calleva – the Belgic defences of Calleva – the date of the Defence – 'Calleva Catuvellaunorum'? – remains of Belgic Calleva – the Silchester dykes – conclusion	
3 THE ROMAN TOWN	63
The Old Town, 45–120 – Mid-Roman Calleva – the streets and the Outer Earthwork (first Roman defence) – the Outer Earthwork 'Annexe' – the second Roman defence – the Town Wall (third Roman defence) – late Roman Silchester – was Calleva a <i>municipium</i> ? – Calleva and the 'British Empire' of Carausius – 4th-century notes – the end of Roman Calleva	
4 PUBLIC BUILDINGS	84
The Town Wall, early 3rd century – ditch – gates – the garrison – the Forum-Basilica – inscriptions and statues – local government – the public baths – finds – the amphitheatre – shows – the <i>Mansio</i>	
5 TEMPLES AND RELIGIOUS LIFE	119
The <i>Temenos</i> and temples, Insula xxx – square temple, Insula xxxv – polygonal temple, Insula vii – other shrines – <i>Lararia</i> – religious remains – Christianity – cemeteries and burials	

CONTENTS

6	HOUSES	134
	The early houses - other early timber houses - the later houses of Calleva - structural details - walls - upper storeys - doorways and doors - windows - roofs - ceilings - wall decoration - floors - mosaic - tile-and-tesserae floors	
7	HOMES	157
	Heating and lighting - water supply - drainage and waste disposal - furniture - kitchens - table wares - gardens and food supplies - animal foods - pets	
8	ECONOMIC LIFE	174
	Population and agriculture - agricultural buildings, installations and instruments - metallurgical industries - iron, silver, bronze and lead - potting - tanning - dyeing and brewing - milling - spinning and weaving - bone and shale - carpentry - retail trade	
9	ROADS AND TRANSPORT	200
	Calleva to London - Calleva to Caerleon - Calleva to Old Sarum - Calleva to Winchester - Calleva to Chichester - Calleva to St Albans - Calleva to Alchester - transport	
10	CONCLUSION	212
	APPENDIX: Access to the Site	214
	NOTES	215
	BIBLIOGRAPHY	239
	INDEX	241

Illustrations

PLATES IN HALF-TONE

<i>Plate</i>		<i>facing page</i>
1	Plan of Silchester by John Wright, 1745	32
2	Aerial view of Silchester	32
3	Guard chambers on the south side of the West Gate	33
4	North-west sector of the Wall	33
5	The Public Baths: view across the cold-bath room	48
6	The Public Baths: the latrine from the east	48
7	The Public Baths: truncated bases of columns in the portico	48
8	Temple in Insula xxxv	49
9	Mosaic in the apse of the 'church', Insula iv	49
10	Reconstruction of the type of Corinthian capital used in the Basilica (by G. E. Fox)	80
11	Mosaic scrolls from the pavement found below House 2, Insula xix (by G. E. Fox)	80
12	Inscribed slab of Purbeck marble naming <i>Calleva</i>	81
13	Freestone head of Serapis from <i>Calleva</i>	81
14	Hypocaust structures in a room of House 2, Insula xix	81
15	The 'Silchester Eagle', found in the Basilica	96
16	Bronze statuette of a girl playing the flute	96
17	Bronze figurine of a <i>paterfamilias</i> sacrificing	96
18	Pillar-moulded bowl of marbled glass. First century A.D.	97
19	Samian bowl by <i>Primus</i> of South Gaul. First century A.D.	97
20	Conical blown glass beaker. Late fourth century A.D.	97
21	Dark grey pottery beaker. Third century A.D.	97

DRAWINGS IN LINE

	<i>page</i>
1 The Silchester horse	25
2 Inscription to Hercules, found in the Forum	34
3 Three Atrebatian coins	46
4 Plan of the defences of Calleva	53
5 Arretine and Belgic pottery	59
6 Examples of Roman handwriting	65
7 Coin of Vespasian	66
8 Coin of Carausius	78
9 Late- or sub-Roman buckle-plate	83
10 Imaginative reconstruction of the West Gate	86
11 Weapons and military objects	89
12 Plan of the Forum and Basilica	91
13 The Forum and Basilica – artist's impression	95
14 Plan of the Public Baths	103
15 Some toilet and surgical instruments	105
16 Jewellery	111
17 Brooches	113
18 Imaginative reconstruction of the temple in Insula xxxv	122
19 Votive bronze axe	127
20 Plan of the 'church'	128
21 The 'church' as it probably appeared	129
22 Lead seal with Chi-Rho monogram	131
23 Plan of House 2, Insula xxiii	139
24 Plan of House 1, Insula viii	139

ILLUSTRATIONS

	<i>page</i>
25 Plan of House 1, Insula xiv	140
26 House 1, Insula xxiii - artist's reconstruction	143
27 Various Roman locks and keys	147
28 Antefix, probably used to ornament a gable-end	148
29 Design of a dado in House 1, Insula xiv	151
30 Plan of a hypocaust - the Roman form of central heating	158
31 Reciprocating force-pump, with wooden stock and lead cylinders	160
32 Gridiron, for use over a charcoal fire	165
33 Iron pot-hooks	166
34 Roman pottery	169
35 Iron tools	183
36 Blacksmith's and other tools	185
37 Weights and measures; knives and a spoon	189
38 'Enough' - a <i>graffito</i> from Silchester	213

*For permission to reproduce the plates in this book,
acknowledgment is made to the following:*

His Grace the Duke of Wellington, K.G., F.R.S., for Plates 15 and 16; Dr J. K. St Joseph, for Plate 2 (from the Cambridge University Collection); the Trustees of the British Museum, for Plate 1; the Calleva Museum, Silchester, for Plates 9 and 13; the Silchester Excavation Committee, for Plate 3; the Society of Antiquaries of London, for Plate 11; the Editor of the Victoria History of the Counties of England, for Plate 10 (from *A History of Hampshire*, Vol. 1); and the Reading Museum for the remainder.

ACKNOWLEDGEMENTS

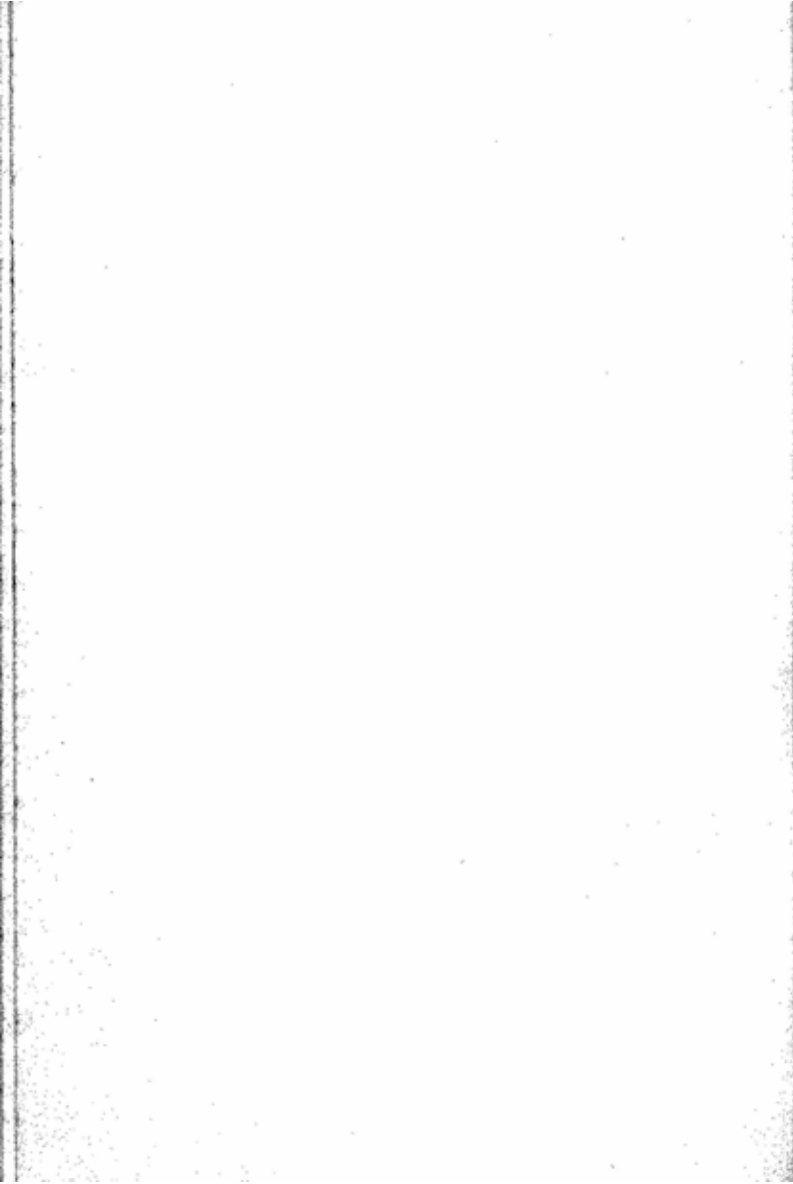
An initial, pleasant duty is to those whose varied help enabled me to write *Roman Silchester*, the basis of which has been six years' almost continual study of the site and its antiquities whilst I was Archaeological Assistant at Reading Museum. I gladly acknowledge my indebtedness to His Grace the Duke of Wellington, K.G., F.S.A., the owner of Calleva and the Silchester Collection; Mr W. A. Smallcombe, B.Sc., F.M.A., F.I.I.C., Director of Reading Museum, and the Museum Committee, which accorded me all possible help and encouragement. For suggesting the book to me I have to thank Mrs M. Aylwin Cotton, O.B.E., M.B., B.S., F.S.A., always an inexhaustible source of kindly guidance; and for much of whatever clarity and conciseness the text may be thought to possess my friend Mr F. R. D. Needham, M.A., F.S.A., has been a very great help. My wife has also given me much assistance, and equal understanding.

In many difficult passages I have had the help of numerous scholars which I have acknowledged in the appropriate places. They include Dr S. Applebaum, Professor E. B. Birley, Mr H. H. Coghlan, F.S.A., Professor C. F. C. Hawkes, and Professor I. A. Richmond. The plans have all been re-drawn from *Archaeologia* (with the permission of the Society of Antiquaries of London) by Miss S. Y. Townend, B.Sc., and except for a few drawings by myself all the objects have been drawn specially for this book (many for the first time) by Mr T. L. Gwatkin, M.A., A.M.A., of Reading Museum. The sources of other illustrations are acknowledged elsewhere.

But for the labours of Joyce, Hope, Fox, Stephenson and others over many long years at Calleva, this book could not have been written at all. Theirs was a marvellous achievement, and one not likely to be repeated. As latest in the long line of those who have dug at Silchester, the writer is well content if his present endeavour can stand, however imperfectly, as an act of *pietas*.

CALLEVAE,
MCMLVII

To
My Father and Mother



Introduction

M. Aylwin Cotton, O.B.E., F.S.A.

In the Roman period, Silchester was one of the most important towns in Britain. Its history, insofar as it is known at present, is presented here in a single volume for the first time. It has not been easy to determine the interesting story of this site for, except for coins, a few inscriptions and the minimum of classical references, it is a town with no written archives to chronicle its rise and decline. The account of Silchester in the pages that follow has been built up by a long series of excavations, followed by patient sifting and interpretation of the evidence thus obtained. This work has been done at varying intervals since the 19th century and, inevitably, the results have appeared to a very great extent only in separate excavation reports, or, in the earliest years, in unpublished manuscripts. In view of the fact that Silchester is the most extensively excavated of all Romano-British towns, it seemed worth while to the author and myself to assemble the main results of all this work and to present it in the form of a book for the general reader with no detailed grounding in Romano-British history or in archaeological technique, but whose interest today has been strikingly aroused in the story of Roman Britain. For those who are already familiar with the subject, it is hoped that the bibliography and full annotation will form a convenient source of reference.

The author of this book is the most recent of the line of excavators at Silchester. He has spent much of his time during the last six years in the study of the town. For the whole of this time he has worked on the classification and cataloguing of the vast amount of material in the Silchester Collection in Reading Museum. This Collection, one of the most comprehensive from any site in this country, belongs to His Grace the Duke of Wellington, on whose family estate at Stratfield Saye Silchester stands. For the last three years Mr Boon has directed excavations at Silchester, conducted at first under the auspices of the Reading Museum and then under

the Silchester Excavation Committee. Also he has lived at Silchester and has explored thoroughly the surface features of the site. His knowledge of it is therefore detailed and first-hand, and no one could be better qualified to write this book. From a wealth of material he has had to choose those facets which will best illustrate the life, economics, and structure of the town as a whole, but to these he has added a considerable amount of fresh interpretation and new discoveries.

Where so much has been done, it might be thought that the work at Silchester was nearing an end. But this is certainly not the case. Much more of this large area is untrenched than is commonly believed, and many are the problems which are still unanswered but which may be solved perhaps by further work. Indeed, in the task of compiling these pages, gaps in our knowledge have become only too obvious.

When the story of a site has to be written almost entirely from the results of excavation, it is inevitable that it will be most sketchy in its initial and final stages, for the earliest levels are the deepest and hardest to reach, even if they are not waterlogged, and the latest levels have often suffered from disturbances by cultivation and may even have been completely removed. Silchester is no exception to this generalization. But in recent years it will be found that excavation has been supplemented by, and its extent influenced by, observations derived from air photography and ground surveys. The fine air-photographs of Dr St Joseph have produced two new and previously quite unsuspected defences which have now been examined. Mr C. W. Phillips, Archaeology Officer to the Ordnance Survey, and his staff, have just completed a new survey and appraisal of the site which will require amendment of the existing maps. Indeed, in the number and complexity of its defences, Silchester again stands out as a Romano-British site without parallel.

Perhaps one of the more interesting features of the story is the contrast between the great excavations of 1890-1909, when the street plan and many of the buildings inside the limits of the stone town wall were exposed in so wholesale a manner that the whole plan of a Romano-British town was recovered, but at a time when excavation techniques did not permit of precise dating; and the later type of excavations, which have first posed the problem to be solved and have then trenched in a more modest fashion, in the

hope of finding the answer and a more precise date, well beyond the limits of the earlier area.

Visitors to Silchester for the first time will find that the site does not easily yield up its secrets. If they have been fortunate enough to wander through the streets and upstanding ruins of Pompeii, Herculaneum or Ostia, or have perhaps seen those majestic North African towns of Sabratha, Leptis Magna and Cyrene, they may wonder why anyone should have described Silchester, with its undisturbed rural scenery, as the British Pompeii. Dr D. B. Harden, in an address given on the occasion of the opening of the little Calleva Museum, referred to this description and spoke of the similarities and differences that exist. Both were smallish towns for their period, both have been thoroughly excavated, and both sites remained unoccupied once their Roman inhabitants disappeared.

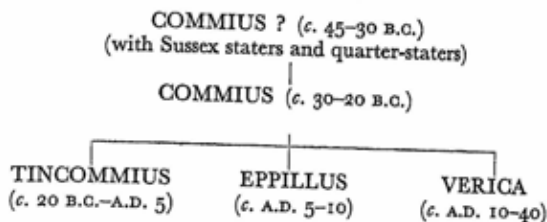
But Pompeii was founded on Greek lines in a Greek part of southern Italy and was a closely packed town, teeming with people. Silchester, on the other hand, was founded on Roman lines in a barbaric countryside to house Romanized Gallo-Britons who did not really wish for, or like, town life, and was a place of open spaces, or a garden city. Then again in Italy and North Africa these great towns after their desertion or at the time of their destruction were buried under lava or blown sand which served to preserve the masonry to much of its original height. Removal of the enveloping lava or sand has been all that was necessary to reveal the final state of these towns.

At Silchester, as at Verulamium and Wroxeter which have also not been built over since Roman times, very different conditions prevailed. Here there has been no burial under a protective covering. As these towns fell into decay, the masonry crumbled or was deliberately destroyed, for these sites offered from Saxon times until the 19th century a ready-made supply of quarried stones or flints. In addition, the houses tended to have stone foundations only in the lower parts of their walls, and once the tiled roofs had fallen, the upper parts of the mud-pisé walls, with or without half-timbering, soon washed away. Our British towns made their own debris, with plenty of assistance from stone-robbers. Often, as at Silchester, only the most impregnable masonry, as the high and well-mortared stone town wall, or the larger earthworks, as the outer earthwork which was superseded in use, have survived to the present day to mark the position of the town. Only in removal

by excavation of the upper layers of soil and debris can the town plan and the form of the buildings be recovered. Also, unless their foundations can be consolidated and given constant preservation treatment, they will continue to decay and will fall into a series of unintelligible weed-covered stone heaps, and are therefore best preserved by re-burial. Having looked at the town wall and outer earthwork, and having perhaps visited the interesting small church and little museum, the present-day visitor to Silchester may, according to his or her mood, feel something of the isolation and eeriness of a deserted town, or they may just enjoy the vista of stretches of sunlit corn – but may nevertheless feel frustrated that so little of the past history of the site is to be seen on the ground. This book is offered to them so that they may be helped to visualize the town as it was in its Roman heyday.

As the author's predecessor in the line of the excavators of Silchester, there is one aspect of the archaeology of the site in which I have an especial interest, and that for a very good reason. When before the last war excavations were restarted, the current story was much simpler than it is now. There was a stone town wall, and it was Roman; and there was a large bank and ditch, the outer earthwork, and it was British or pre-Roman. By the end of those excavations the wall had acquired a date within the wide period of Roman occupation and an earlier earthen defence on the same line, but the outer earthwork was no longer British, but was also Roman. Thus, having upset the existing story of the pre-Roman settlement, its rediscovery has been something of a preoccupation. For there are reasons for believing that before the foundation of the Roman town of Silchester one of the British Belgic tribes possessed an *oppidum* known as *Calleva Atrebatum* – the Town in the Woods of the Gallo-British Atrebates. Some of these reasons are the fact that the town was mentioned by this name in the Antonine Itinerary, and the pre-Roman dating of some of the pottery and finds from the site, and, above all, because the dynasty of Atrebatian Princes, headed by Commius the one-time ally and later enemy of Julius Caesar, in one series of its inscribed coins used *Calleva* as a mint-town. Flan moulds for coins have been found on the site.

The tentative dating of the rulers of the Atrebates, as deduced from these uninscribed and inscribed coins by Dr Derek Allen (*cf. Archaeologia* XC [1944], 44), is:



This external evidence is, of course, debatable. It has been suggested that the name *Calleva Atrebatum* is that of a Roman Cantonal capital, as was *Noviomagus* (Chichester), a Roman foundation and the capital of the *Regnum* or kingdom of Cogidubnus, the ruler set up by the Romans over that part of West Sussex, after the conquest, which had formerly been part of the Atrebatian lands. Professor Birley and Mr Boon have new and interesting views on this point. The imported pottery of early date, more especially the Arretine and butt-beakers, lacks stratified associations, and some of the flan moulds were found in the infilling of a pit intermingled with Roman material. When Commius's son Eppillus struck coins marked with the legend EPPI/CALLEV it could be argued that his mint could have been on an earlier *Calleva* elsewhere. There is therefore every incentive to search the ground further for the initial occupation levels of the site at Silchester, which will provide reliable concrete evidence.

It has been fascinating to watch the search for confirmatory Belgic levels or structures which has been undertaken during the last three seasons' work at Silchester. It will be seen from the author's description of this work that *Calleva* of the Atrebates is not to be located easily. The outer earthwork, in a totally unforeseen manner, managed to creep back into the picture when an additional line of defence was discovered and excavated in 1956, absorbing time and energy before it could be diagnosed and assigned to its rightful place in the defensive sequence as not, as hoped, the site of the Belgic *oppidum*, but as part of the complex of that great defence. In the search for the Belgic town, it might well be said that in Rampier Copse in 1939, and in this 'Annexe' in 1956, Mr Boon and I both met our Waterloo. But some advance has been made in that the excavations of 1954-55, inspired as was

the work of 1956 by the results of air-photography, have revealed an obliterated defence which may be either immediately pre-Roman or initial Roman. Further work to verify and supplement the more precise dating of this important phase is planned for 1957. We are still not quite sure that we have found the Belgic *oppidum* as we are still far from the time when Calleva was inscribed on the coins of Eppillus, and in any case have to remember that in the last years before the Roman conquest of A.D. 43 the coin picture, as shown by Dr Derek Allen, and the historical evidence, which suggests that Verica (the Atrebatian king of that period) was in Rome pleading for Roman support, tell us that Calleva was then almost certainly lost to the Atrebates and was under the domination of either Cunobelinus the Catuvellaunian or his sons Caratacus and Togodumnus. It is still rather a question of whether it is *Calleva Catuvellaunorum* rather than *Calleva Atrebatum* that is as yet known on the ground.

Here again however the story has been amplified and an important new feature has been added to the external evidence by careful ground survey combined with excavation. Whereas in the previous plans of the town the street plan and the main roads leading to the town behaved in a manner that baffled interpretation, the discovery of this earliest defensive line and its entrances, and the demonstration that it was these entrances that determined the original lay-out of the main Roman roads, has gone far in explaining the earlier anomalies.

Something of the Atrebatian background and of the Atrebatian coinage is related in the pages of this book. Indeed, it is from their coins that they are best known at present, and the archaeological evidence that should be placed beside the coin distribution is, as was the Silchester story, scattered and as yet incompletely correlated. This is however a separate question which falls outside the scope of this study of Silchester itself.

Of especial interest in the account of the long Roman occupation of the town is Mr Boon's attempt to sub-divide it into 'Old', 'Middle' and 'New' Towns. This is a brave new essay which has not been previously tried on the existing evidence, and he has been careful not to strain that evidence beyond its limitations. Following the initial observations of Lady Fox, ideas on the 'Old Town' have been elaborated. For the whole period, the more important public buildings and houses have been illustrated by reproduction

of earlier published plans, but these have been supplemented by new three-dimensional reconstructional drawings.

In essence, the sequence of events and related structures at Silchester is now this. First a polygonal site of about 100 acres was defended by a univallate bank with a flat-bottomed ditch (an immediately pre-conquest type in Britain) which had almost certainly four entrances on to which the original Roman lay-out was aligned. Occupation levels of this period are still to be sought, and its precise date in relation to the Roman conquest of A.D. 43 remains open pending further excavation.

Then the 'Old Town' or early Roman occupation of the site came. To this period are attributed the early timber houses, the Forum-Basilica and some of the public buildings and houses which are out of alignment with the regular street plan, and which are presumably aligned on an earlier and less regular lay-out. In terms of occupation levels the 1938-39 excavations showed a Claudio-Neronian occupation of Period I of c. A.D. 45-65, a Period II occupation with remains of timbered huts and houses with two phases dated as c. A.D. 65-100 and c. 100-120. These levels were found to the north and outside the first defence which shows that it was no longer in use at these times, and the Claudian filling found sealing the rapid silt of its ditch also shows that the ditch was not kept cleaned out and maintained as a defence from soon after its original cutting onwards. The impression given is that of an open settlement which spread beyond an obsolete defence. This state of affairs is consonant with either a Belgic *oppidum* in which occupation continued into the Roman period, or with an initial Roman foundation.

Unfortunately in the areas in which the outer earthwork has been excavated no comparable succession of associated occupation levels has been found. That defence has at present only been related to the Claudio-Neronian Period I, and it cannot be earlier than that period.

The next two important events to be considered in the town's history are this outer earthwork and the lay-out of the regular street-plan. Here there is room for discussion, and again it is the outer earthwork that is the difficult problem. The fixed point, at present, is the date at which the regular street-plan was laid out. In 1938-39 this was shown to be certainly earlier than c. A.D. 160 and, though in contemporary use with the Period III occupation

level of c. A.D. 120-160/170, was tentatively given a lower dating bracket of A.D. 90-120 as the most plausible for its design. The 1955 excavations showed that the infill of the ditch of the first defence, and its levelling to take the street which sealed it, was not complete until the early second century. This supports a date c. A.D. 120 or perhaps a little earlier.

Two interesting points can now be considered. Firstly, should not the regular street plan be sub-divided into an original grid, the 'Haverfield square' discussed by the author, and a later outer extension? If so, it is to the latter phase that the above arguments apply as the streets excavated belong to that part of the system. Secondly, whilst it has been shown that the outer part of the street plan extends to the outer earthwork, was this already in existence or was it contemporary with either phase of the street plan (if two phases are accepted)? Mr Boon has set out his arguments in favour of a Hadrianic date for both the outer earthwork and the regular street plan. Whilst maintaining that the actual excavation evidence for the lower end of the date bracket for the build of the outer earthwork is far from clear, I still find it easier to accept it as a hasty defence built by the local population, using a native building technique, against the threat or in the knowledge of the Boudiccan sacking of Londinium and Verulamium in A.D. 61, rather than as a military defence under the fuller Romanization of Hadrianic times. Whilst the former position has an analogy in the 'Fosse' period at Verulamium, I can quote no analogy for an earthwork of such a form in Hadrianic times. Having perhaps served its purpose as an immediate defence at the time of the Boudiccan upheaval, could it not have served as a sort of town boundary until the next phase which, when the regular street plan was either designed or extended, formed a pre-existing limiting line? This again seems to give the feeling of an open town with no defences being kept in a state of readiness between the post-Boudiccan period and the mid- to late-2nd century, which is consonant with the state of affairs elsewhere in Romano-British towns.

The 'New Town' existed from at earliest Antonine times onwards, when the area was reduced to a polygonal site of again about 100 acres, but which also did not coincide entirely with either of the two earlier lay-outs. It was defined at first by an earthen bank with a V-cut ditch which truncated the outlying

parts of the street plan. At the very end of the 2nd century at the earliest, and perhaps a number of decades later, the outer half of this earthen bank was cut away and was thrown into its ditch, and a stone town wall was built, using the remaining half of the earthen bank as the core of an internal ramp. An outer U-shaped ditch was cut beyond a wide berm. In addition to British parallels quoted previously for similar reductions in town areas, M. Marcel Renard (in *Latomus* VII [1948], p. 331) writing of Silchester, drew attention to a comparable state of affairs in Gaul, as for example at Tongres and Avenches. He thought that the grandiose lay-out of larger areas had been an attempt to imitate defences of more important towns which had been over-ambitious and, when it was a question of later defence, shorter and more economical lines had been used. This argument would support a deliberate fully Romanized lay-out as postulated by Mr Boon, rather than a large hasty regional refuge area as I have suggested.

Since the time at which those dates for the building of the inner earthen bank and the stone town wall were given, much more work has been done and more consideration has been given to comparable fortifications elsewhere in Britain. Whilst it might be said that, in general, the Silchester story falls into line, further experience has shown that more evidence from a greater number of cuttings can easily alter a too precise dating, and that, on the whole, the dates first given, except in very favourable circumstances, tend to be the earliest possible rather than those which are contemporary. With this in mind, I have therefore added the words 'at the earliest' to my previous dating suggestions for these two defences.

The final phases of the occupation of the town lasted, inside the stone town wall, with no further defensive modifications, until its desertion.

The end of the story is, like the beginning, difficult to demonstrate. It does not appear that there was any disaster in which the town was sacked or burnt. Probably, when there was no longer any central organization to control and regulate the civic amenities, it fell into decay and its population deserted it gradually for the countryside farmsteads. The place in this phase of the outlying earthworks and the most easterly Ogham stone found are dealt with, and interesting pointers are given which may perhaps take the end of our story into the 6th century A.D.

One of the saddest parts of the long Silchester story is the fact that, except for Thomas May's publication of the pottery types, the majority of the objects found at Silchester remain unpublished. In this book something has been done to remedy this state of affairs. As many illustrations as possible have been included of the more noteworthy objects, all of which have been drawn afresh or for the first time from the originals. That this was possible is due to the fortunate circumstance that the material could be worked on at the Reading Museum. His Grace the Duke of Wellington, the owner of the Collection, and Mr W. A. Smallcombe, Director of the Museum, with the consent and co-operation of his Museum Committee, generously agreed to allow facilities for this to be done. The Deputy Director, Mr T. L. Gwatkin, is not only our artist, whose talents are always in demand, but is deeply concerned with the design and rearrangement of the setting in which the whole Silchester Collection is due to appear any time now. In dealing with the classification, description and analogies of the objects themselves, Mr Boon is in his element. His selection of those pictured and described in relation to the varying industries in which they were used gives, to my mind, one of the best illustrations, based on detailed factual information, of the daily economy of a Romano-British town. Numismatists will notice with interest that he has catalogued 12,500 coins from Calleva (including some 5,000 at Stratfield Saye not previously listed) and that publication of the Silchester coin hoards is promised.

There are to me several places at Silchester where it is pleasant to pause and think of these various phases of its occupation. Standing inside the South Gate of the town, the view towards Winchester is long-distant and pleasantly wooded. It must have looked much as it does now in the days when the Atrebates moved northwards, perhaps from Selsey or *Venta Belgarum* (Winchester), towards Berkshire and the Thames Valley. The view from the North Gate has none of this feeling of distance and movement, but reminds me that in this direction, beyond the Thames, was the kingdom of the Belgic Catuvellauni who were not only the hereditary enemies of the Atrebates but also encroached on their lands and may have taken Calleva itself towards the end of the reign of their greatest ruler Cunobelinus, if indeed they were not the founders of the site. Walking across the town from the West Gate to the East Gate, the phases of the earlier Roman occupation come

to mind as one passes by the site of the Forum-Basilica, or sees the crop marks of the street plan in the ripening corn. Before the East Gate is reached there is the Temple site to command attention, where the intriguing problem of whether or not it was a Christian Basilica can be considered, and one can wonder whether it was one of the first buildings in Britain in which Christian rites were practised. Or, leaving the East Gate, does another Roman Temple underlie the present church? Finally, I like to pause in the thickets of Rampier Copse, where the outer earthwork is at its most majestic, and believe that here the ground has not been disturbed since the days when it was walked on by its Romano-British citizens. Rampier in springtime has bluebells and blossom to delight the eye, and a peaceful quiet in which to meditate on the past of Roman Silchester.



1 The Silchester Horse – a bronze handle in the form of a stylized horse, reminiscent of those on ancient British coins (cf. Fig. 3) or the White Horse of Uffington. Roman period. Basilica, 1870.

Silchester and its Exploration

Silchester is a place that a lover of antiquity will visit with great delight.

WILLIAM STUKELEY, 1724

The Roman-British town at Silchester lies ten miles south-west of Reading by road, and seven north of Basingstoke. It is a mile or so within Hampshire, the northern boundary of which makes a curious salient to include the ancient site. To give it the name by which it was daily known for more than four centuries, Calleva of the Atrebatas occupies a spur at the eastern end of an elevated gravel plateau. On north, east and south the desolate ruin of the Wall commands views plain and open enough today, but when Calleva was first settled, so enshrouded in forest as to give rise to the name of the town.* Inside the hundred acres enclosed by the Wall we see today broad fields, traversed only by a lane leading to Manor Farm and the parish church of St Mary, aloof now¹ from the village which straggles round the margins of gorse-grown Common a mile to the westward. These two are the only buildings standing within the Wall; but a trench cut anywhere within the area would expose the wreck of public buildings and houses used and lived in sixteen hundred years ago, and more.

In 1722, William Stukeley paid his first visit to Silchester. On reading his description,² the modern visitor might wonder whether much of consequence has changed since. Approaching from the eastward, he wrote:

All the country hereabouts, and to *Silchester* is clay, moor, sand, gravel by spots, much boggy, springy land, much good land but more bad. the water is blackish everywhere. *Silchester* is a place that a lover of antiquity will visit with great delight. it stands upon the highest ground thereabouts, but hid with wood, which grows very plentifully all about it. many were the *roman* roads

* The Woodland Town³ of the Atrebatas, Calleva Atrebatum. The modern name, Silchester, is probably of similar origin: it means *City of the Sallow-Copse*.³ The Atrebatas, p. 44.

that met here, tho' now scarce any road, which is the reason 'tis so little known ... the walls of this city are standing more or less perfect quite round, perhaps the most entire of any in the *roman* empire, especially the whole north side of the wall which is a most agreeabl sight. ...

There is, however, one very great change, although the site itself may barely show it. The excavations of the last ninety years have transformed it from a place 'so little known' into one of the most famous in Roman Britain, an archaeological classic, the only town in the Province whose plan and buildings are known in such fair completeness and detail; and the place of origin of one of the finest and most extensive collections of antiquities in the Roman Empire. Much of this mass of material has been published, much has not. It is the task of this book to present, in a compact form and by the widening light of archaeological knowledge, some of this abundance of information which Silchester offers relating to the civic and social life of Roman Britain.

Many of the famous antiquaries of the past visited the Roman town, excavated there, or wrote about it. The story of its exploration over the last four hundred years well illustrates, therefore, the development of British archaeology from its earliest topographical beginnings to the careful techniques of digging and research current today. To the interest and romance implicit in this story the first chapter is dedicated.

Most of our knowledge of the Roman town is derived from excavations undertaken by the Society of Antiquaries of London between 1890 and 1909. These gave us a great gift: a town-plan to most intents complete; but the work was done before modern techniques of digging, and ideas on stratification, had emerged. The excavators were thus unable to reveal the history of the place as it would now be done, and of all the eighty houses, Forum-Basilica, Baths, temples, and other buildings uncovered, and the street-plan in which they were set, not a single one was dated, nor were the successive occupations of the town identified. Until recent years, little but guess-work was available for tracing its growth and decline. In 1938, however, a beginning was made towards remedying the lack of chronological information. A skeletal framework for the earlier Roman period was then established; and later work has brought to light fresh evidence concerning the pre-Roman *oppidum* which has long been thought to exist.

SILCHESTER IN THE MIDDLE AGES

The Town Wall marks the desolate site as firmly now as in Stukeley's day. It still stands as much as 15 feet high with no preservative treatment whatsoever, especially in the sector containing the south gate. When King John was at Silchester in May 1215,⁵ a month or so before Magna Carta was sealed, it must have been an even more astonishing sight than it is today. Moreover, at that time, as the contemporary description of Caerleon by Giraldus Cambrensis⁶ shows, enough of the principal buildings within the Wall must have been visible to give the monarch a very good idea of what the place had been like. Unfortunately Silchester did not have its Giraldus: Geoffrey of Monmouth (also 12th-century) mentions Silchester under its modern name,⁷ but it is mentioned only, and there is no description.

The position of the parish church and possibly also of the adjacent Manor Farm leaves no doubt that their builders had in mind the exploitation of the vast resources of building material close at hand. Not to mention the almost inexhaustible supply of bricks and tiling, or flints ready dug and dressed, the Oölite and Purbeck marble imported in Roman times for columns, statues and facings became of especial value for re-use in an area possessing no very suitable building stone. Of the 42 Corinthian columns, each 27 feet high, that adorned the original Basilica, or the Tuscan columns of the Forum, the merest fragments remained in place. The most impressive pieces of this enormous tonnage of material were later found at the South and West Gates, where they had probably fallen from stone-robbers' wains lurching over the uneven rubble there. In fact, the finest piece of sculpture from the site, a head of the god Serapis, was found in the garden of a Silchester house where it had formerly served as a cheese-press weight.⁸

It is very likely that a sub-Roman *enclave* persisted at Silchester until an advanced date,⁹ but local names and legends show, as usual, that small idea of the nature of the site entered later tradition. It was, of course, a *chester*; but its outermost and latest defence, with which the earliest Saxons must have been concerned, acquired only the name Grim's Bank,¹⁰ and the prominent track of the Roman road eastwards to London, only the name Devil's Highway. To the ordinary folk who came to till the abandoned Roman fields, the shadow of the great Wall meant less and less,

until Rome was forgotten in the leaf-mould and plough-soil burying the buildings, and the giant *Onion*¹¹ came in fancy to dwell in the useless sluice-gate through the south-east wall. Only the learned could people its desolation, and with equal fancy place there the coronations of Constantine III and Arthur, name it the seat of a bishopric, or suggest that it was founded by Constantius II.¹²

THE WALL AND THE STREETS

For the earliest description of Silchester we turn to John Leland, who as King's Antiquary visited the site in the time of King Henry VIII, about 1540.¹³ As all who go there, Leland was greatly impressed by the Wall, which he notes as:

... a wall of stone about 2 miles compas with 4 gates. On that wall grow some okes of 10 carte loades the pece. ...*

He also observed, though without comprehension, the phenomenon of the crop-marks¹⁴ of the streets. He calls Silchester a town, but does not discuss its Roman origin or mention any antiquities found there as he does in the case of Bath. With William Camden's visit later in the same century we are on surer ground. In the *Britannia* (1586)¹⁵ there is a fairly detailed description, and Camden did not shirk an attempt at a personal exploration of Onion's Hole, flat on his face. Perhaps the most interesting item in the *Britannia* account is what may well be the first record of a crop-mark interpreted correctly. In the English of Gibson's edition:¹⁶

The inhabitants of this place told me, that it had been a constant observation of their's, that tho' the soil be fat and fertile, yet in a sort of baulks that cross one another, the corn never grows so thick as in the other parts of the field; and along these they imagine the streets of the old city to have run.

Leland¹⁷ has only:

Ther is one straung thing seen ther, that in certen partes of the ground withyn the waulles, the corne is marvelous faire to the yee, and ready to shew perfecture, it decayith.

* The Wall has always been famous for the trees growing on the backing mound. 'not long since, lady Blessington cut 500 l. worth of timber from thence' - Stukeley, *Itin. Curies.*, 1724, p. 170. The trees have not been cut for a long time, but the brush growing in the city ditch outside is cut to form bundles which are used to line the dock walls at Southampton, for the protection of ships.

Well indeed should corn grow on the rubbish and accumulations of a town of four hundred years' standing.

From Camden onwards via Hearne,¹⁸ Stukeley, Ward¹⁹ and Colt Hoare²⁰ to the Ordnance Surveyors of 1873, the crop-marks pass into literature. John Aubrey, who visited the site in 1667, seems to have been the only early antiquary not to comment upon them, probably because they were not visible; and so (for the man who recorded the crop-marks of the holes at Stonehenge now named after him) his description²¹ of what the Lord Bishops of Salisbury and Chester observed at Silchester in 1658 is cautious:

To these Antiquarian remarks of mine, I shall add ... a Philosophicall Corollary, which I myself have been avowed by two learned Prelates, of unquestioned veracity, both jointly and severally; & severall ones yet living who have heard them say the same ... that one might discern in the Corne-ground (it was about April) the Signe of the Streets, passages, and also the Harths.

Stukeley has left us the first and most inaccurate published plan of Silchester. He made a parallelogram of it. Aubrey, strangely enough, made the same mistake. The shape might possibly be taken for an oblong at first sight, but the most cursory examination of the circuit would, of course, prove the error. There does in fact exist at Stratfield Saye House an estate plan dated 1653 in which the shape of the Wall is fairly accurately given. It is the work of a professional, and neither Aubrey nor Stukeley was such.

On Stukeley's further visit in 1724, the chance of amending his remarks was let slip. Instead, he spent his time at the Amphitheatre opposite the north-east angle, which had always been considered to be the remains of a castle. Thomas Hearne, the quarrelsome Oxford antiquary, for example, took no special note of it in a visit made during 1714; and so, when Stukeley called upon him in September 1724, he may have had an uncomfortable interview:²²

This D^r Stukeley [writes Hearne] is a mighty conceited man, and 'tis observ'd by all that I have talked with, that what he does hath no manner of likeness to the Originals ... he pretended to have discover'd a Roman Amphitheatre at Silchester, a draught of the Walls whereof he shew'd me. This again is fancy. I have been at Silchester. There is nothing like it. ...

These views were not, however, to go unmodified. Many years later, we find Hearne transcribing details from what he and his cronies once called Dr Stukeley's *Hundred Fancies**.²³

THE FIRST EXCAVATIONS

Silchester was immensely attractive to those who sought to augment their collections by the discoveries of plough or spade. The famous Lord Burghley, for example, possessed an inscription from Silchester,²⁴ now in Trinity College, Cambridge: no doubt of chance finding, as were, presumably, the objects which formed the collection of Robert Betham, Rector of Silchester 1698-1719.²⁵ If digging took place, other than for building material or road-metal, it was confined to the idle following-up of walling or pavements exposed by the plough, and in any case there is scant record of it. To the middle of the 18th century, however, we can ascribe the first systematic archaeological investigations which sought not only to enrich a collection but had the serious study of the site at heart.

John Stair,²⁶ yeoman, of Silchester, who afterwards became a cobbler at Aldermaston and then keeper of the Hind's Head Inn there, was not content merely to loot the soil as many before and after him, but was particularly interested in recovering the plan of the Roman city. As its first excavator, Stair deserves a little space here. The details of his life are obscure, but as far as his Silchester activities are concerned, we have a record in some letters written by Dr John Collet, of Newbury, to Professor John Ward of Gresham College. These, together with some plans and sketches in Stair's hand, are in the British Museum.

His first claim on Collet's – and so Ward's – attention was by his finding an inscription in the Forum.²⁷ This was in April 1744. It then transpired that for several years he had been working on a plan of the Roman town, and had excavated several buildings:

Newbury Jan. 5. 1744/45

S

According to your desire I now send you the Plan of the Ancient City of Silchester, as drawn by Mr John Stair of Aldermaston. ...

* The full title of Stukeley's book is *Itinerarium Curionum, Centuria I.*

The method he took to discover where the Streets formerly ran, was by observing just before the Harvest, for several Years, the places where the Corn was stunted, & did not flourish as it did in the other parts. These places are very easily distinguish'd in a dry Summer, & run in strait lines, crossing each other. ... Then upon digging here, he found a great deal of Rubbish &^{ca}, & the plain Ruins & foundations of Houses on each side of the Streets. Whereas in the middle of the Squares there is no such Rubbish, nor any appearance of the ruins of foundations of houses, & moreover the Corn flourishes there very well. ...

By digging in these places Mr Stair found the inside of the Market place to have been above 90 Yards in length from North to South and above 50 yards in breadth. ...

And he further says, that the principal Streets that lead to the 4 Gates of the City were about 8 yards broad, whereas the other Streets, were but about 6 Yards in breadth as near as he could discover.

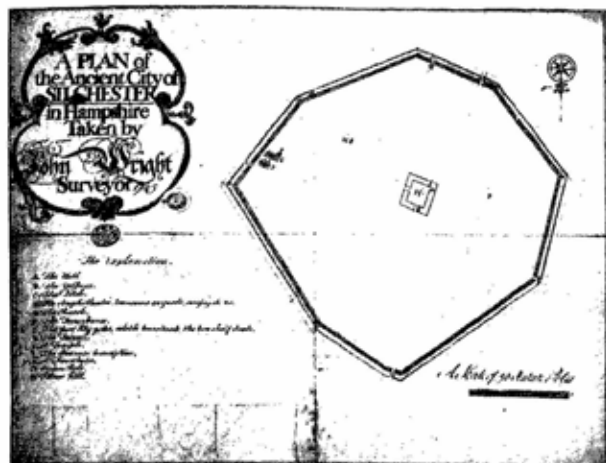
I had almost forgot to mention one very remarkable Circumstance Mr Stair assur'd me; that in digging below the foundations of some of the Houses, he discover'd the remains of some other foundations made of Flint stones cemented together with Mortar. This Mortar was quite decay'd, & he could easily crumble it with his Fingers, whereas the Mortar of the upper Foundations was of quite a different texture & as hard as the Stones themselves. ...

I shall only add, that Mr Stair liv'd a great many years at Silchester, & I have no reason to doubt in the least, of the truth of what he assures me.

I am S^r your most oblig'd humble
Servant,

John Collet.²⁸

Stair's first attempt at a plan in 1741 is grandly labelled (perhaps by Collet) as 'measured ... with a Chain by John Stairs Surveyor' - which Stair was not. He made the outline of the Wall an irregular but balanced octagon, as inaccurate in its way as Stukeley's had been. Fortunately, by 1744 Stair became associated with a professional surveyor named Wright; the final plan which they produced between them is as accurate as many small-scale archaeological plans published today, and there was certainly no great advance upon it until Henry Maclaughlan's of 1850.²⁹ Dr Collet's letters had their desired effect upon Ward, who visited Silchester with Stair and Wright in 1745. A rough draft of the new



1 The first plan to show the Roman street-system, as worked out by John Stair from crop-marks about 1744. 2 Aerial view of Calleva from the west, showing the 'Belgic defence', the Wall, and the streets.

Crown copyright reserved





3 Guard-chambers on the south side of the West Gate, looking into the town. 4 North-west sector of the Wall, showing its typical construction and the settlement over the ditch of the 'Belgic defence'.

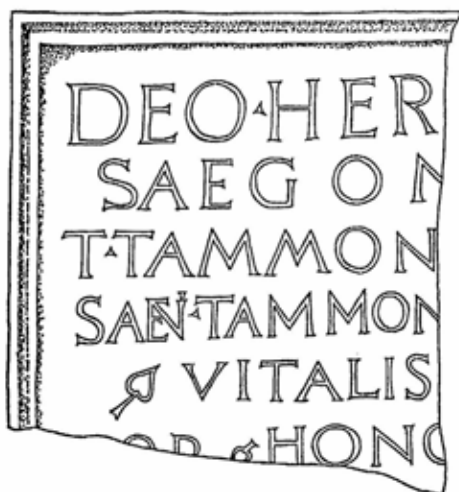


plan was made on the spot, and afterwards redrawn by Wright as shown in Pl. 1.³⁰ This plan Ward published with some notes of the site, taken largely from Collet's letters, in the *Philosophical Transactions* of 1748. Stair's name was left off the final copy of the plan, and we find him complaining to Collet about it, as well he might.³¹

Stair was at work at least until 1752, which is the date of our last Collet letter, and probably afterwards. We can trace his activities down to about 1759, when Isaac Taylor's great *Map of Hampshire* appeared.³² A plan of Silchester is engraved in a corner vignette; the streets are indicated, and buildings are planned along the line of the main road between the Forum and the West Gate, and elsewhere.

THE ANCIENT NAME OF SILCHESTER

Early in the 18th century the ancient name of Silchester was first realized. Horsley, in his posthumous *Britannia Romana* of 1732,³³ is usually credited with having been the first to prove that it was the *Calleva Atrebatum* of the *Antonine Itinerary*.³⁴ He was indeed the first to publish the identification, but from a note of Hearne's we know that Edmund Halley, the astronomer, held the same view as early as 1718.³⁵ Hearne records the matter only to register his dissent: like most antiquaries of his day, he believed that Silchester was the *Vindomis* of the 15th route of the British section of the *Itinerary*. The 'odd notion' that it was really *Calleva* passed largely unheeded. Halley, in claiming to demonstrate his point, would have done so like Horsley, by comparing the routes and mileages of the *Itinerary* with a modern counterpart such as Ogilby's *Roads* of 1675, the most accurate gazetteer at his disposal.³⁶ By working from sites like London, Winchester and Bath, whose ancient names were not in dispute, those of intermediate stations could be postulated. In the case of Silchester there was ample scope for cross-checking, for *Calleva* is mentioned in the 7th (in full) and the 13th, 14th and 15th routes. It is curious that Stukeley, who realized that Silchester was a nodal point of the road-system, failed to perceive that its identification with *Vindomis* was impossible; but it is perhaps too easy for us to smile at the efforts of the early antiquaries to identify Roman places. We have the accurate maps which they lacked, and fanciful etymology, on which they mostly had to fall back, was no substitute. Camden, for example, placed *Calleva* (or, as he chose



After Ward, *P&A Trans.* 1744, g.f. 8.

2 Inscription to Hercules, found in the Forum.

to read the name, *Gallena*) at Wallingford, on the grounds that *Gallena* = *Guallenford* = *Wallingford*. It was Camden, too, who placed *Vindomis* at Silchester on the strength of his identification of *Calleva*.³⁷

Today there is no room for doubt. In 1907, an inscription was found at the Temple in *Insula** xxxv. This slab contains the word *CALLEVAE*, and for good measure refers to a guild established in the town³⁸ (Pl. 12, p. 81).

From Stair's Forum inscription of 1744 (Fig. 2, above) another ancient name gained renewed currency. This was *Caer Segont*, supposed to be the British name, and it has a longer and more insidious history than *Vindomis*. Nennius, the 9th-century Welsh chronicler, gives *Kair Segeint* in his list of the twenty-eight cities of Roman Britain. In the 12th century, Henry of Huntingdon suggested a correlation with Silchester, probably having read Geof-

* I.e. 'island' - the Roman name for blocks of land delimited by four streets.

frey of Monmouth's mention of the place a few years before.³⁹ Thus Silchester came to be blessed with the attribution of events not only in Geoffrey's myth-history but also in Nennius'.

The inscription found in 1744 contained a dedication to Hercules, DEO HERC[uli SAEGON], which Dr Ward expanded to *Deo Herculi Segontiacorum*, 'To the God Hercules of the Segontiaci'. The Segontiaci were a minor tribe mentioned by Caesar in 54 B.C., and Camden had placed them in the Silchester region. The inscription therefore appeared to bear out his belief. In actuality, the Segontiaci, as is clear from Caesar's narrative, were a clan of south-east Britain, one of five equally obscure, who surrendered to Caesar and thus occasioned their first and last mention in historical sources.⁴⁰ Moreover SAEGON[is not part of a tribal name, but seems to be approximately equivalent to the Latin *saevus*, savage, and to stand on the Forum inscription as a title or epithet of the god.⁴¹ Kair Segeint, as Ward knew, was *Segontium* (Caernarvon) in North Wales.

19TH-CENTURY EXPLORATIONS

We come now to the great period of activity at Silchester, which has continued down to our own time. For a century or so after Stair, little in the way of fresh investigation was attempted. Part of the *Mansio* near the South Gate was exposed in 1833, but that is the only work worthy of notice.⁴² In 1864, however, a second phase of excavation was begun, stimulated by the artistic and antiquarian taste of the second Duke of Wellington, whose family had come into the possession of the manor of Silchester in 1828. Inspired by his recent acquisition of a collection of coins and other relics from the farmer of the site, the Duke persuaded the Rector of Stratfield Saye, the Rev. J. G. Joyce, to open some of the most likely areas within the Wall, beginning with a spot near the North Gate, where a floor had been struck in ploughing.⁴³ In November 1864, therefore, Joyce began work with four men, and continued to supervise the excavations until his death in 1878. Thereafter, work continued sporadically until 1884. Two of his men survived the eighteenthies to conduct visitors around the Forum, and were described as 'two old men ... who scrape the ground ... the survivors of four, the other two having become effete.'⁴⁴

Joyce's main achievements were the uncovering of the Forum-Basilica (from July 1866); the Temple in Insula VII; some houses,

notably House 1, Insula 1; and the North, South, East, and Amphitheatre Gates. His discoveries are described with care and insight in *Archaeologia*,⁴⁵ but better still in a private *Journal* which he illustrated with numerous pen and water-colour sketches of the buildings and objects found, including a few section-drawings when the stratification caught his eye. By great good fortune the *Journal* was bought by Reading Museum in 1934. Previously, it had been almost unknown, although a facsimile had been prepared for the Duke by the Rev. H. H. Munro, Joyce's successor at Stratfield Saye, and illustrated by Miss Munro.⁴⁶

As was to be pointed out in 1890, Joyce worked to no specific plan of campaign. He dug a number of scattered buildings, going mainly by the crop-marks to find them, and did not attempt to uncover an entire insula from which the general arrangements of the town might be inferred. In the first place, as was still natural at the time, both he and the Duke were moved by thought of the mosaics and small finds which might accrue; but as the years progressed, we can see quite clearly from the *Journal* that this aspect of the work was never pursued to the detriment of the careful examination and recording of the various structures. Joyce attempted, for example, what his successors of 1890-1909 never did: he not only elucidated the various structural alterations which a building underwent, but also ascribed dates to them from associated datable objects. In the case of House 1, Insula 1, he explains:⁴⁷

By reference to the *Journal* of August 10, 1865, it appears that in clearing the western side of the ambulatory, the traces of the most ancient floor level were met with; to arrive at them, we had already dug to below the footing of a later wall ... fifteen inches perpendicular of gravel below the lowest course of this masonry were dug through, and at that depth lay the level bed of concrete upon which the ancient floor had been laid. ... Close by this wall, not the erased wall but another and newer one, was a coin of the Emperor Commodus. We may not be wrong, therefore, in attributing the alteration, in the course of which this coin must have been dropped by a workman, to the date 180 or 190 of the Christian era; certainly it could not be earlier, or no coin of Commodus could be there. ...

This is a section-drawing in words, and the value of the stratified coin is given full weight in exactly the same way as it would be nowadays. Elsewhere the chronological elucidation of the house is

not so felicitous, but Joyce again displays the care and devotion which he brought to his archaeological studies in recording the discovery of a coin of Vespasian embedded in the shrine-wall of the polygonal temple in Insula VII.⁴⁸

The connexion of Silchester with early soil-science deserves to be more widely known. In 1877 the great naturalist Charles Darwin was assembling material for his book on *The Formation of Vegetable Mould through the Action of Worms* (1881). Ill-health made it impossible for him to go to Silchester in person, but his sons and assistants, Francis and Horace Darwin, took great advantage of the cuttings open at the time, and fresh ones made especially for them.

On the 13th [of November 1877] the Messrs Darwin went to Silchester with me, and being most happily favoured by the weather we were enabled to carry out in the course of three hours a very full & careful examination of the several exposed sections which exhibited good cuttings from the herbage directly down to the floors.⁴⁹

Three experiments were carried out, on the nature of the subsidence of floors, the texture of mould overlying the floors and walls, and the penetration of walls by earthworms. Joyce says of this last:

I think that this last Experiment gave me more surprize & brought more conviction than any of the others. I should have said, and did say, that it was perfectly impossible such a wall could be penetrated by, or could contain earth worms.⁵⁰

Full details of the experiments are given in the *Journal* and in Darwin's book, which also contains reproductions of section-drawings in the *Journal*.⁵¹

The excavations of 1864-78 were a stimulus to fresh activity. In February 1890, the grand scheme to uncover the entire area bounded by the Wall was placed before the Society of Antiquaries of London, as being 'the proper body to undertake the complete and systematic excavation of Silchester'. The time was propitious. In 1890 nearly nothing was known of the general plan of Roman-British towns. Joyce had supplied a great deal of information about the type of house to be found in them, and his excavations had demonstrated the potential richness of the site. Nevertheless, the task of 'complete' excavation was prodigious, and is well described:

The complete excavation of a site of 100 acres is of course a stupendous work, and the large size of the area as seen from the walls is enough to dishearten a good many people. If however we give way to such feelings, Silchester will never be excavated at all, and even if it will take more than one man's lifetime to do it thoroughly, that is no reason why the work begun by Mr Joyce should not systematically be resumed and carried out unflinchingly year after year.⁵²

In the event, twenty years' work was required. The vastness of the undertaking strikes us today perhaps as sharply from the progressively ageing portraits of those engaged upon the work – as we have them in photographs taken during the course of it – as in the size of the area contemplated.

Prominent amongst those who supported the scheme was General Pitt-Rivers, often described as the founder of modern archaeological method, who delivered a memorandum to the third Duke of Wellington and obtained his approval and promise of help. Work began in Insula 1 and upon the gates, on 23rd June 1890. W. H. St J. Hope, assistant secretary of the Society of Antiquaries, and G. E. Fox were the principal proposers and directors of the scheme, together with F. G. Hilton-Price, the Treasurer of the Fund, and Mill Stephenson. Stephenson took an increasing part in the day-to-day running of the work and even acted as foreman for several seasons in order to reduce costs, and latterly was director. Mr Fred Smith, late custodian of the Calleva Museum at Silchester, has described him to the writer as being much liked and trusted by the men, never to be seen without his pipe in his mouth, ready to have a word with each one at the end of the day's labour. Hope occupied a much more august place in Mr Smith's recollection. Fox, a much older man, almost as had been foreshadowed in the preliminary remarks quoted above, did not live to see the completion of the work: he died in 1908. Challenor Smith and J. B. P. Karslake (who lived locally) also helped in the direction of the work from time to time, not to mention others.

It was a boast of the time that no day's work was done without the superintendence of a Fellow of the Society. The three main directors took lodgings conveniently near the site, and attended the excavations for a good part of each year's six-month season. The interests of Fox and Hope lay mainly with the structural remains, and it is to their hands that we owe the excellent plans in

Archaeologia, which make it an easy matter to re-discover the various buildings on the ground. To Fox are due nearly all the splendid coloured scale-drawings of mosaics and architectural fragments that adorn the annual reports in *Archaeologia* or appear elsewhere.

The Silchester Excavation Fund was supported partly by the Society of Antiquaries – both directly, and from the newly-established Research Fund – and partly by local and national subscription. Wages accounted for some £250–£500 annually – a figure covered by subscription, or by splendid individual donations. The only other single major expense was the rent for the ground occupied each season, for example, £43 in 1892, £40 in 1907. Wherever practicable, the area was dug by insulae, the boundaries of which could be told from the crop-marks or by reference to the street-plan as laid down from crop-marks on the Ordnance Survey 25-inch sheet of 1873. The numbering of the insulae on the final plan of 1908* is in the order in which they were explored, and not in any more formal sequence: a testimony to the extent to which agricultural interests supervened in the work, try as the excavators might to adopt a clear plan.

One of the requirements to which the excavations were subject was the restoration of the ground for cultivation afterwards. This partly answers the perennial question why, when once uncovered, the Roman city had to disappear again. The 107 acres within the Wall are nearly the entire acreage of Manor Farm. Structural decay accounts for the rest of the answer. The Forum-Basilica, opened by Joyce, was still visible as late as 1908, but by this date it was in a lamentable condition, the walls mere lines of loosened flints, and the worked stones shivered by frost. Under these circumstances, Fox strongly urged that the building should be protected by being again covered up,⁵³ since re-grouting or roofing it was financially quite impossible. How much more, therefore, for the entire site!

The working procedure was to lay out parallel trenches over the allotted area. Any structure found was isolated and uncovered, the spoil being dumped where possible on the site of a neighbouring street. Finally, a workman went round the trenches with an iron probe, to test the ground for soft spots concealing the mouths of pits and wells not already noticed. From such places came most

* Reproduced as a folding plan at the end of this book.

of the 500 whole pots and many of the other interesting relics in the Silchester Collection at Reading Museum.

The labour force was mainly drawn from Silchester, but some men would walk from neighbouring villages as far afield as Baughurst (about 5 miles) to begin their day's labour at six a.m. The directors arrived about nine o'clock, and working continued with the usual breaks until six p.m., even, at first, on Saturdays. The wives of many of the men brought their dinner to the trench-side, and some enterprising fellows grew vegetable marrows on the spoil-heaps, as photographic evidence shows. The pay was half a crown a day, with extras in the form of coin money ($\frac{1}{2}d.$) and occasional larger gratuities for important finds – inscriptions at 3*d.* a letter – or for especially dirty work, as that entailed in clearing out the pits and wells. A sovereign, for example, was paid to the finder of a hoard of silver coins in 1894. Some of the men used to go to the site on Sundays to conduct visitors, and made considerable sums in that way.

The standard of archaeological technique at Silchester has often been compared unfavourably with that evolved by Pitt-Rivers about the same time. Rightly so. But, as Sir Mortimer Wheeler has expressed it,⁵⁴ it would have taken 'ten Pitt-Riverses ten times as long as Pitt-Rivers's two decades to have dug Silchester accurately and in depth'. The comparatively quick returns have assisted Roman studies in general – with small profit to the site! Desire to complete the excavations within a reasonable number of years made this expediency well understood by the excavators, and was no doubt responsible for the withdrawal of Pitt-Rivers from active participation. After a promise made in 1891 to excavate in the defences, unfortunately unfulfilled, we hear no more of his name in connexion with Silchester. He died in 1900.

On the structural side, the record is hard to equal. The weak spot is that the finds of pottery, coins etc. were not related stratigraphically to the buildings in and about which they occurred, and the buildings were therefore left undated. For example, in 1903-4, the various phases of alteration in the Public Baths building were carefully worked out on a structural basis; but, apart from the somewhat dubious help of an inscribed tile, and mention of some coins found in such-and-such a place, no attempt was made to unravel the succession of the alterations in terms of years.⁵⁵ It is an anachronism to expect such a report to be couched in the

modern style. In 1903 there was so little to go on, apart from the structures themselves and whatever might be deduced from their style; coarse pottery meant little, and the chronological study of Samian and other fine wares etc. was in its infancy. There was thus little incentive to prepare the detailed record which Pitt-Rivers used to keep, in the hope that it would mean something some day.⁵⁶ Insula and pit provenance was considered good enough for the majority of labelling.

Perhaps the greatest hindrance to the development of a suitable technique of recording was the lack of assistance in trench-side supervision, especially when the large extent of ground opened each year is considered. Pitt-Rivers's paid assistants were the key-stone of his labours: Hope and his colleagues seem to have had to deal with all contingencies themselves. In consequence it was only what appeared important *at the time* that was dealt with. The result every excavator knows. The absence of a recording system even for coins, the chronological value of which is obvious, is all the more unfortunate because the Silchester Excavation Committee had decided to withhold publication of the finds in detail until after the excavations were finished.⁵⁷ Except for incomplete publication of the pottery and coins,⁵⁸ and certain objects described in the *Archaeologia* annual reports or subsequently by various scholars, it is all unpublished. But for the coming of the Great War, H. B. Walters and the other specialists concerned might have produced their promised reports.⁵⁹ It is, in fact, only latterly that a beginning has been made even with the cataloguing of the collection.

MODERN EXCAVATIONS

We near the end of the story. After 1909, Colonel J. B. P. Karslake continued his investigations into the Outer Earthwork surrounding the Roman city,⁶⁰ and in 1938, a chance came to supply something of the chronological background. In that year, the (then) Office of Works undertook the conservation of the north sectors of the Wall, and Mrs M. Aylwin Cotton was invited to conduct exploratory excavations to save whatever dating evidence there might be from destruction in the course of the masons' work.⁶¹ The result was happy for the Roman town. Not only was the visible wall dated, but also an earlier rampart on the same line beneath; the street-plan was examined, proved to extend as far as the Outer

Earthwork, and also dated. Lastly, the Outer Earthwork was tested. For many years it was considered to be the defence of the pre-Roman settlement, but a disappointment lay in store: the bulwark of pre-Roman Silchester fell. It was proved to be quite conclusively of early Roman construction; and, from 1939 to 1947, when a fourth (and previously unsuspected) system was found in the course of an aerial survey, there was nothing on the site of Calleva which could be connected with the numerous remains of pre-Roman date in the Silchester Collection.⁶²

THE SILCHESTER COLLECTION

Since 1890, all Silchester finds have been deposited on loan at Reading Museum by successive Dukes of Wellington. In the estimation of the third Duke, with whom the initial arrangement was made, Reading was convenient of access from most parts, but yet within a reasonable distance of the site itself, in short an ideal place for the housing of the Collection which, even before the opening campaign of 1890, filled the little Site Museum – originally a portable shooting-box of the Duke's, with a shower bath. The Collection went to Reading rather than to a museum in Hampshire not merely because of the greater space available at Reading – even in 1890, special arrangements had to be made – but because of the foresight of Dr Joseph Stevens, the founder and honorary curator of Reading Museum, who persuaded the Corporation of Reading to offer to house it. Apart from a small number of antiquities mostly found by Joyce and preserved at Stratfield Saye House,⁶³ all that the site has yielded in modern times is now in public care. A scheme to display the wealth of the Silchester Collection in accordance with modern practice is now nearing completion and will, it is hoped, together with the 'reserve' material and the catalogue, serve the general public and scholar alike, and so bring fully to fruition the plans and hopes of 1890.⁶⁴

The Belgic Settlement

'We seem to discern a typical country town, where life was easy and commonplace, where the civilization of the age was known in its less exciting aspects, and the quick exhausting life of a great municipality or commercial centre found no entrance. Such a town can have no history, and Silchester has none.' So wrote Haverfield of Roman Silchester over fifty years ago.¹ We do not find any mention of Calleva in the ancient historians; and if no events took place there of consequence enough to rouse the distant muse of Graeco-Roman history, then, in slumbering the Roman centuries away, Calleva was more fortunate than many another town which found chance involvement in great affairs. Only once or twice perhaps, in its four hundred years of life, was Silchester at all nearly concerned in a crisis of history.²

The evidence upon which this chapter and the next are based is almost entirely archaeological, and can seldom tell the kind of tale which a writer contemporary with the events would have been able to set down. We can broadly trace the growth, vicissitudes and decline of Calleva, but we lack the means of clothing these generalizations (which are all that our means of enquiry permit us to make) in the detail and humanity of a contemporary historical source. Before going farther, it will be as well to recall briefly the ordinary method of enquiry used to achieve our archaeological dating and other results. In this chapter, the distribution of certain sorts of Ancient British coins and pottery will be brought into account, and the results given will be based on deductions which can be made (with fair probability) from the coins themselves and from the earliest dated remains.

Dating structures by objects found in association with them works thus. Suppose, in breaking up a solid concrete floor, an 1860 penny and some broken china are found below. Nothing could have been added to this deposit once the floor had been laid, and so the floor must be later than the latest object beneath:

in this case, after 1860, or a date more approximately indicated by the china; though of course a 'starting date' of 1860 does not necessarily mean that the floor was laid in 1861. The floor, in other words, is a sealing layer through which later material cannot find its way. Conversely, if the floor can be dated on external grounds, anything found beneath it must be of earlier date. By the discovery of inscriptions, or in the case of sites whose period of occupation is known from historical sources – like some of the forts of Roman Germany – it is sometimes possible to be very precise. On the other hand, in the case of a defensive system such as that described later in this chapter, covering in the mass thousands of square yards, complete excavation is impracticable. The cuttings which can be made are of comparatively small extent, and the sealed material which they may with luck produce is a correspondingly small part of what in theory would be recoverable.

Archaeological dating is thus an appraisal of evidence which in the main is incomplete and, by its nature, rarely susceptible of exact interpretation. In other words, the results are matters of surmise and inference, being incapable of direct proof: we can only presume that our cuttings offer, or do not offer, grounds sufficient for dating. If they appear sufficient, and the deductions based on them are consonant with any other fragments of evidence which may exist, the probability of the interpretation being correct, that is tantamount to historical fact, is very high.

THE ATREBATES

One of the most important sources of Roman-British place-names is a compilation of 7th-century date known as the *Cosmography of Ravenna*. Among over 300 names in the British section, those of ten towns are distinguished from the rest by the addition of the name of the tribe in whose territory each was situated. Calleva is one, and is similarly mentioned in the *Antonine Itinerary*.⁴ In Ptolemy's *Geographies*⁵ (2nd century) it appears as the only town of the *Atrebatii*. The names so distinguished in these sources are undoubtedly those of tribal or cantonal capitals under the Roman administration, and there is epigraphic proof. In Roman times, therefore, Calleva was the metropolis of the Atrebates, to give them their most usual name, and to what extent it was also the pre-Roman capital will appear in the following pages.

In origin, the Atrebates were one of the Belgic tribes which, a

scant half-century before Caesar's invasion, had spread into Gaul north of the Seine and Marne.⁶ The Atrebates occupied the chalk country of the Pas de Calais, with a capital at Arras – a region not at all unlike that which a section of the tribe was to occupy in Britain. For their adventures in this country we have a certain amount of numismatic and archaeological evidence; but as our subject is Calleva, their ultimate metropolis, the following account is given only in order that the town may be placed in proper perspective.

After the conquest of the Atrebates in 57 B.C., Caesar appointed a new king, Commius, for whom (he tells us) he had a high regard, and who was clearly a man of great resource, courage and determination – a curious choice for a puppet.⁷ But in 52 Commius joined the great revolt led by Vercingetorix against Roman domination,⁸ and even after the final Roman victory did not surrender for some time, mainly because of a shameful attempt on his life at a parley. So far as Caesar's narrative in the *Gallic War* goes, that is the end of the story. The sequel appears in the *Stratagems* of Julius Frontinus, governor of Britain A.D. 75–78. Commius must have found his new position irksome, and decided to leave Gaul for ever. Ships were secretly fitted out to carry him to Britain, but information reached the Romans and Caesar pursued the Atrebat party to within sight of the shore. It then became evident that Commius had escaped, and the pursuit was called off without close investigation. The stratagem is that the tide was out, the ships high and dry, and Commius had merely ordered their sails to be set in the hope of deceiving the Romans into a belief that he was already standing out to sea.⁹

The story was well over a century old when Frontinus recorded it, and he may have heard it during his British governorship: but there is no reason to doubt the truth of this crumb of history. The Atrebates appear in Britain – although Commius could not have brought a large party – and, at the end of a long series of uninscribed coins which we can attribute to the early years of Atrebat settlement in south Britain, there comes a coinage bearing the name of the Gaulish leader.

There may however have been a fairly large Atrebat settlement in this country before the flight of Commius, for the Roman conquest of the tribe in 57, and the imposition of a Roman nominee as its king, may well have precipitated a migration to these



3 *Left:* Silver coin of Eppillus (c. A.D. 5-10) and gold quarter-stater of Tincommius (c. 15 B.C.-A.D. 5) with Calleva mint-marks. *Right:* Gold stater of Commius (struck c. 35-15 B.C.). The last was found at Reading.

shores.¹⁰ Moreover, the distribution of the coins attributed to the British Atrebates lends *prima facie* support to this suggestion. The uninscribed coins are gold staters of about 90 grains weight.¹¹ These exhibit a disjointed, three-tailed horse on the reverse, and are most thickly clustered not on the south coast, where Commius must have made his landfall and where the majority of the later inscribed coins issued by the Atrebatian kings have been found, but in the region of the Middle Thames centring roughly upon Reading, and mostly to the south of the river. This concentration does not seem easily explainable on the grounds of trade with neighbours to the north, and it appears quite probable that these early staters were issued in an autonomous *enclave* in this district before Commius finally arrived in Britain. The theory gains more than a little colour from the fact that Commius was considered to possess authority in Britain and was sent by Caesar as an ambassador,¹² shortly before the invasion of 55, for that reason. This claim may surely mean that part of the tribe was already established here.

Frontinus clearly thought that the episode described took place not long after the Gaulish revolt, and we may therefore date it to about 50 B.C. If, on the other hand, Frontinus was merely rationalizing a British legend with the facts given in the *Gallie War*, the flight of Commius may not have occurred until later. The coins bearing his name do not seem to have been issued before about 35 because they are lighter (about 82 grains) than the uninscribed coins which, apart from the name COMMIOS, they closely resemble (Fig. 2).¹³ Time must be allowed for the gradual drop in weight to have occurred.

The Atrebates were not, however, the first Belgae to settle in this country. About 75 another migration had taken place,¹⁴

involving the Catuvellauni, who left behind in Gaul so weak a mother-tribe that Caesar omits all mention of it. This was a genuine folk-movement, and its archaeological record is far more impressive than that of the Atrebates. We can trace the Catuvellauni by means of their cremation-cemeteries etc. — cremation was at this period a characteristic Belgic rite¹⁵ — and their pottery, especially a burial-urn with a pedestal foot. They proceeded from the Thames Estuary into Hertfordshire, where they had a capital first at Wheathampstead near St Albans,¹⁶ then at St Albans (*Verulamium*) itself, and finally under king Cunobelinus (c. A.D. 15–40) at Colchester (*Camulodunum*) in Essex. The Catuvellaunian realm was constantly expanded until by the time of the Roman invasion of 43 most of south and south-east Britain was held in subjection. The nascent Atrebatian kingdom was inevitably drawn into conflict with the Catuvellauni and appears to have been entirely absorbed just before the Romans came.

The first major settlement of Commius and his party was probably at Selsey Bill in west Sussex, where over 300 British coins have been found washed up on the beach.¹⁷ The site of the *oppidum* has evidently been destroyed by the encroachment of the waves. From Selsey inland lay an easy and attractive route into the heart of Hampshire, along the chalk downs, and the subsequent fortunes of the colonists can be understood from a study of their coins and pottery, together with those of the peoples with whom they came into contact.¹⁸ On the theory of a two-fold Atrebatian settlement proposed above, their history can be interpreted as an attempt or a series of attempts to establish and maintain a connexion with their Middle Thames compatriots. Britain had been occupied by iron-using people for some 400 years, and it was a mixed folk, long immersed in peaceful agriculture, which in the main had to face the invaders' onslaught.¹⁹ The number led by Commius was perhaps no greater than that brought by many an early Saxon chieftain to these shores, five or six centuries nearer our own time; and virile, necessitous, and above all hardened by campaigns against Roman arms, Commius and his companions cannot have found it a difficult task to impose their rule.²⁰

The archaeological evidence does not yet make possible a complete relation of these events; we must content ourselves with observing that during the northward movement Calleva may have been founded, and that at the time of their greatest expansion the

Atrebates controlled an area embracing Hampshire, Berkshire, most of Surrey, and parts of Sussex and Wiltshire.²¹ At no period, however, does the realm seem to have acquired the cohesive strength of the northern Belgic kingdom of the Catuvellauni, and quite early in its history we can perhaps discern centrifugal and discordant tendencies which were ultimately crystallized in the Roman civil divisions of this part of the country.

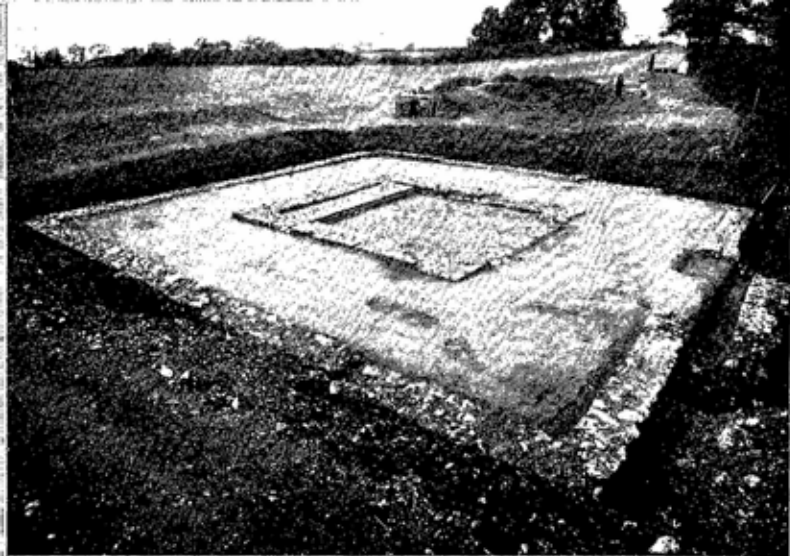
Numismatically there is a full record of the Atrebatian kings.²² We have coins bearing the names of Commius, Tincommius, Eppillus and Verica, each of the last three describing himself as *Commi Filius*, son of Commius. Of these, Verica was still alive in A.D. 43, being beyond doubt the Berikos mentioned by Dio Cassius as a British refugee at the court of the Emperor Claudius shortly before the Roman invasion began.²³ Tincommius also sought Roman sanctuary, and his name appears on the Ankara Monument set up about A.D. 7 to record the achievements of Augustus.²⁴ Tincommius was certainly in power about 15 B.C., for one of his silver coins copies a Lyons issue of Augustus struck at that date,²⁵ and he may have acceded to his father's throne about 20 B.C. His first coins are of the same primitive type as his father's, and it was only later that he caused Roman designs to appear. The reign of Eppillus, especially important for Calleva as will be explained in a moment, appears to have lain between that of Tincommius and that of Verica, and has been assigned to the years A.D. 5-10 by Mr Derek Allen.

Whether the Commius named on the coins is the Commius of Caesar is another question, and it has been doubted. The space of ninety years between the historical Commius and the historical Berikos seems an extraordinarily long time for two generations to span, even if Commius was a young man at the time of his escape. Possibly, therefore, the three princes were using the title *Filius* for dynastic purposes only, and were not 'sons' at all. This would follow the precedent of Augustus, of which these Romanizing rulers must have been aware. In many ways this seems a little difficult to believe, for it is always possible that the Commius of the coins and the historical Commius were identical and that there is a tangible link with the Gaulish patriot in the coins which bear his name - the first inscribed coins of Britain. Since we do not know how old Commius was at the time of his escape, we are not likely to solve this problem.²⁶

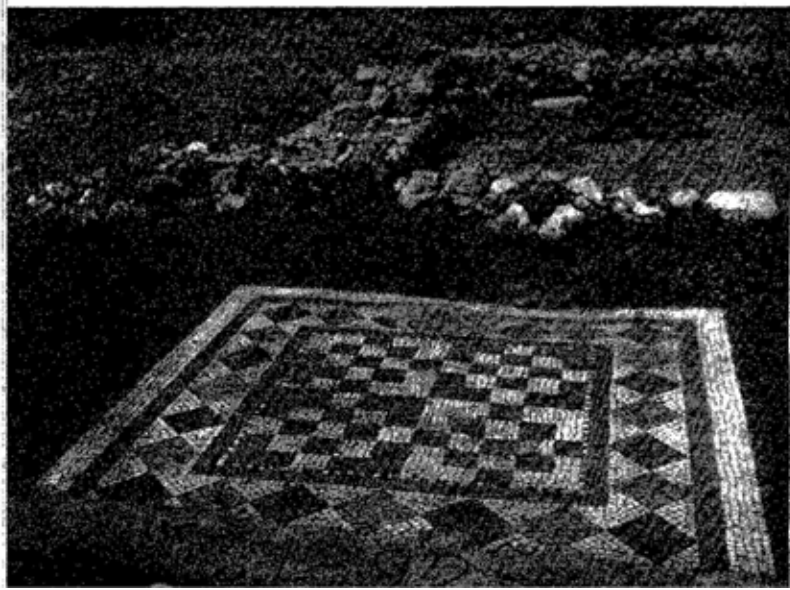


5 Public Baths: view across the *frigidarium*, with a hypocaust in the foreground. 6 The latrine from the east. 7 Truncated bases of columns belonging to the first portico, buried under road make-up.





8 Temple in Insula xxxv, with foundations for an eastern entrance and (in the *cella*) for statues. The 'Calleva Stone' was found near this temple. 9 Mosaic in the apse of the supposed church, Insula iv.



It is in any case unlikely that Commius – historical or numismatic – ever set eyes on Calleva. The site has yielded no relevant relics²⁷ which can be ascribed to a period before various sorts of fine, imported pottery (Gallo-Roman and Arretine, Fig. 5, p. 59) came into use, i.e. the late first century B.C.; and indeed the introduction of these wares agrees well with the adopting of Romanized coin-types under Tincommius and all this implies in terms of wider Roman influence.²⁸ Some rare quarter-staters of Tincommius bear the letters CA²⁹ – best understood as an abbreviation for the name of the town (Fig. 3, p. 46). If this is so, Calleva must have been founded by the last few years B.C., scarcely afterwards, and probably not many years before. By the time that we reach Eppillus, however, we are on firmer ground with some quarter-staters and silver coins,³⁰ excessively rare, which bear the legends EPPI CALLEV and EPP REX CALLE – the latter the first coin struck in Britain to bear the familiar title *Rex* (Fig. 3). With these there can be no quarrel, and at latest, therefore, Calleva was founded in the first decade after Christ.

The site itself now claims our attention. It has already been described in terms of modern topography.³¹ We approach it today through a southern countryside of ordered arable and pasture fields, neat coppices and regular plantations. Only here and there, like a palimpsest, in the rough gorse and birch of Silchester Common, or in the matted woodland of Rampier Copse, does the ancient landscape show through.³² Silchester lies about 320 feet above sea-level, on plateau gravels laid down in the Ice Age about 500,000 years ago. In natural state, such a terrain supports scrub, and at best light woodland easily cleared by fire, as the autumnal blackened wastes of many a neighbouring heath remind us. Gravel-pit sections in the region reveal but the scantiest humus, and point the contrast between the vegetation of the plateau and that of the surrounding area, which is mostly the heavy London Clay of Eocene age, and supported a far more intransigent growth of damp, mixed forest where oak predominated, full of fallen trunks and lanky saplings striving for light, gloomy, dense, pathless, and boggy in the stream-valleys and bottoms. These dark, encircling woodlands which gave Calleva its name have now all gone except for the attenuated remnant of Pamber Forest to the south-west of the ancient town.

The gravel spur upon which the Woodland Town arose was evidently chosen with great care for the double advantage of economy and safety which it offered. More commanding sites were to be found on the chalk downs a few miles to the south or south-west, but only at the cost of adequate water-supplies, amply guaranteed at Silchester by various streams still extant which draw upon abundant springs at the junction of the gravel with the Eocene beds. There are again other spurs near by, equally suitable for settlement, but none was so conveniently adapted to the contemplated size of the original *oppidum*. The choice fell on Silchester because of the tactical advantages of the ground, which are not great but are certainly considerable, as a visit to the environs of Calleva will demonstrate. The easiest access is from the west, and could be fairly effectually blocked by the bank-and-ditch which was later constructed to augment the natural scarp elsewhere.

THE BELGIC DEFENCES OF CALLEVA?

At the end of Chapter 1, mention was made of the 1939 excavations in the Outer Earthwork.³³ The massive bank and ditch, so Belgic in appearance and so long believed to be the British defence of Calleva, proved to contain Roman brick in essential parts of its structure and at one part actually overlay the remains of an earlier camp-fire. The potsherds strewn about this spot included many of pre-Roman type, but one piece was a jug-base of a type not found in this country before Roman times. A Roman date for the Outer Earthwork was therefore inescapable, and it is supported by other pottery from the 1909 cuttings, not then examined in detail or published.³⁴ Mrs Cotton's trenches nowhere struck a pre-Roman level, although much of the earliest occupation-material might well again have been of pre-Roman origin. Belgic Calleva thus remained more real than apparent. The British coins mentioned above suggest that the site was occupied from at least the earliest years of the 1st century A.D., but apart from these the only link remaining between the Roman town and its predecessor was a quantity of ill-recorded pottery from the old excavations. In recent years, however, the position has changed. Conditions for aerial photography were especially favourable in the dry summer of 1949, and crop-marks of a previously unsuspected and wholly buried defensive system were clearly to be seen (Pl. 2, p. 32). They were photographed from the air by Dr J. K. St Joseph of

Cambridge, and the key to Belgic Silchester now seemed to lie at hand.

On the ground there is scarcely a vestige of this new defence, although it was once even more massive than the Outer Earthwork. What the Romans left, the plough has removed, but in the main it was already obliterated by the middle of the 2nd century.³⁵ It has, however, left its mark on the Wall, where a pronounced subsidence can still be seen (Pl. 3, p. 33),³⁶ affecting more than a hundred feet of the north-west sector owing to the very oblique passage of the ancient ditch below, whose infilling could never be rendered as solid as the unyielding gravel upon which the Wall is generally based.

The line of the new defence is known precisely for about two-thirds of its circuit (Fig. 4, p. 53). The area enclosed must verge on 90 acres. From the subsidence, it runs to an almost right-angled corner just inside the North Gate, and thence straight to the south-east corner of Insula xxvii. In Insula xxii (1899) it was found, but described as a 'large rubbish-pit of uncertain limits', and it also passed under a building of Insula xxvii (1901) with buttressed walls and a relieving arch. The outer edge of the ditch at the extreme corner of Insula xxvii, where a change of direction takes place, is marked by a buttressed boundary-wall.³⁷ On the south side of the modern track, the ditch was found by electrical earth-resistivity survey in 1955,³⁸ but its course thence towards the Wall is obscure. It must have influenced the siting and alignment of the Public Baths in Insula xxxiii (p. 101) and it is suggested that the defence passed hard by the eastern side of this edifice and (following a very indeterminate crop-mark on some aerial photographs) then crossed the Wall near its SSE. angle.³⁹ In the meadow immediately south of this point a strong crop-mark appears on the photographs, and slight traces of the ditch and bank are to be seen near the field-gate into the lane. Faint indications of the course take us as far as the north edge of Rampier Copse, where another strong crop-mark, substantiated by slight surface relief, carries the line round again to the subsidence in the Wall, by way of another angle just to the south of the modern track. In shape and compass, therefore, the defence compares well with the Wall, and like it possesses four entrances at the north, south, east and west, which appear on the aerial photographs as slight inturnings from the line of the barrier.⁴⁰ This type of entrance, common in Iron Age

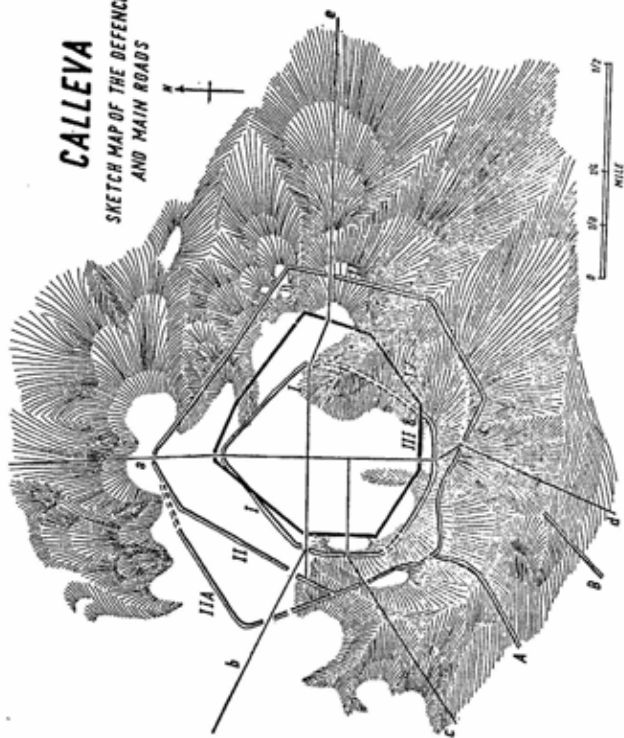
earthwork, permits the enfilading of an attacking force, and was retained by the architect of the final Roman defence of our site.

Even before excavation, it was possible to draw inferences regarding the new defence. In point of date, not only was it obviously earlier than the Wall, but earlier also than the street-plan of the town, for in several places the crop-marks are clearly enough defined to show streets overriding the ditch – which had therefore passed out of use by the time of their construction. This, as Mrs Cotton proved in 1938, took place in the 2nd century (p. 66), and it thus became a question of a defence built and *destroyed* within the limits of the 1st century. As to its nature, it was equally clear that we were concerned with a system of quite a different order from the others. The Outer Earthwork, the bank and ditch which are hidden by the Wall defences, and the Wall itself, are concentric upon the Forum, whilst the new defence is eccentrically sited to the westward, partly inside and partly outside the later Roman town. From these considerations it became possible to think of the new defence as that of the long-sought Belgic *oppidum*, and it was a disappointment that the first trench across it (on the west of the Wall) failed to produce evidence of pre-Roman construction. The ditch was 45 feet wide and 11 feet deep, cut with sloping sides and a twelve-foot flat bottom at the very base of the gravel. In 1955 another section, within the walled area, was opened under the auspices of the reconstituted Silchester Excavation Committee; and on this occasion better fortune was in store. The ditch was of very similar dimensions, and although the bank had been almost entirely obliterated by the early 2nd century, enough remained to show that it too had been constructed on a base of about 45 feet. There were also traces of a counterscarp bank, so that in all the defence was over a hundred feet across.

In an undisturbed portion of the bank and in a hollow below, about two dozen scraps of pottery were found which presented no Roman features at all and, little as this was upon which to base any conclusion, further confirmation of pre-Roman date became available upon the complete clearance of that part of the trench containing the ditch. Very little was found in the foot or two of gravel silt in the bottom, but the first layer of infilling (made apparently from a counterscarp bank, for it was the only layer to be tipped in from the north side) contained seams of earth full of potsherds in which Roman and Romanized vessels were outnumbered by those

CALLEVA

SKETCH MAP OF THE DEFENCES
AND MAIN ROADS



4 SKETCH-MAP OF THE DEFENCES and main roads of Calleva, based on Maclaughlan's survey of 1850 I: the 'Belgic Defence'. II: the Outer Earthwork. III: the 'An-nexe'. III: underlying bank. IV: Wall. A, B: Dykes, possibly of pre-Roman date. *a*: North Road (to Alcester). *b*: West Road (to Speen etc.). *c*: South-West Road (to Old Sarum). *d*: South Road (to Winchester and Chichester). *e*: East Road (to London and Verulamium).

of pre-Roman form and fabric by more than two to one. Of the especially diagnostic Samian ware (p. 168) only five tiny scraps occurred, in marked contrast even to the next layer of filling (18 fragments = 17 vessels) and the main Roman infilling of the early 2nd century (over 200 fragments = 186 vessels). In all, it seemed likely that this filling was the first of a number made at this particular spot in the ditch at successive periods, and there was no reason to suppose that it contained material later than about the year 50, or indeed that it was thrown in much later than about that date. If so, since it is extremely unlikely that the Roman government would allow the fortification of a British civil site so soon after the initial conquest, a pre-Roman date for the defence is assured.

The wide, flat-bottomed ditch is characteristic of Belgic defences in Gaul, and appears about the time of the Caesarian conquest.⁴¹ We can hardly speak for the bank of the Silchester example, but to judge from others it was lofty as well as wide, and was perhaps increased by the addition of gravel scooped from within the *enceinte*, as happened in the case of the Outer Earthwork. The type may indeed have been designed specifically against Roman assault, for on one occasion Caesar speaks of the extreme difficulty encountered in storming a Belgic *oppidum*, despite the smallness of its garrison, 'on account of the width of the ditch and the height of the rampart' – reasons well applicable to the type of defence which we have been considering.⁴² An undestroyed British example is at Oldbury near Ightham in Kent, and belongs to a date no earlier than the eve of the Roman conquest.⁴³ The first Catuvellaunian capital at Wheathampstead has defences which lack the wide, flat ditch probably because the tribe had left Gaul before the inception of this type.

THE DATE OF THE DEFENCE – '*CALLEVA CATUVELLAUNORUM*'?

On these grounds, a pre-Roman dating seems secure; but however Belgic and un-Roman the structure of this defence might appear, and however well the available archaeological evidence supports the belief, there is one very serious obstacle to it. This is the number and disposition of its entrances. Four would be unexpectedly many for an earthwork of the period envisaged, even allowing for the strongest Roman influence; and the almost exact corre-

spondence of the entrances with the main E.-W. and N.-S. lines of the Roman street-plan – *kardo* and *decumanus*, laid out with reference to the cardinal points of the compass – is in itself sufficient to arouse the suspicion that the chronological riddle is not as yet unravelled. The further investigations that are planned may deny this defence to Belgic Calleva, and relegate it to the earliest Roman days of the town, although it is plain that the street-plan, *as we have it*, is the product of a still later time. Such thoughts however lie too far in the realm of conjecture to find a place here, and for the moment we may rest on the results of the 1955 season in briefly considering those occasions in pre-Roman times when a defence such as this might have been erected.

Judging from Oldbury, it need not be early; and shards from the bank are so similar to those from the Claudian filling that it seems almost possible to join them together. Two theories are possible at present: either the defence was constructed against the Romans, on the eve of an invasion which had been more or less a certainty since about the year 40;⁴⁴ or else it was somewhat earlier. There is nothing to choose between these possibilities, but in explanation of the second, it may be mentioned that Verica was apparently faced with a serious Catuvellaunian threat about the middle of his reign – first to the corn-lands of the Upper Thames Valley, and then to other parts of his kingdom – as intrusive coins, found deep in Atrebatian territory, seem to indicate.⁴⁵ They are issued in the name of Epaticcus, a brother of Cunobelinus, comparison with whose own coinage suggests a date about 25 for the invasion.⁴⁶ Coins of Cunobelinus also occur fairly thickly in the northern part of the Atrebatian realm, and so it is open to doubt whether Verica was ever able to regain the lost territories. The 'Belgic defence' of Calleva could therefore have been built by the Atrebates against the threat or actuality of Catuvellaunian aggression, or by the Catuvellauni against either the return of the Atrebates, or the Romans. To return to the theory expressed in the earlier part of this chapter, Catuvellaunian reaction to the consolidation of the Atrebatian realm and the growth of Calleva as its northern capital would be only too likely to result in an attempt to restore the previous order of things; and eventually, as has been noticed above, Verica's position became untenable and he was forced to flee to the Continent. Presumably the entire kingdom thereupon fell into Catuvellaunian hands.

REMAINS OF BELGIC CALLEVA

Among the numerous objects in the Silchester Collection which can be assigned, if in many cases only provisionally, to the pre-Roman occupation of the site, several deserve individual mention here.

The coins of Tincommius and Eppillus with a Callevan mint-mark – Verica does not appear to have struck any so marked – have already been described. None has been found on the site; but certainly to be connected with minting practice there are some fragments of terra-cotta moulds, which analysis has shown must have been used for the production of metal pellets.⁴⁷ The moulds took the form of flat slabs, burnt grey and hard by intense heat, containing rows of small pits about $\frac{1}{2}$ inch across and $\frac{1}{2}$ to $\frac{3}{4}$ inch deep. Spectrographic examination revealed the presence of silver and copper as well as a trace of gold, the latter probably an impurity. It is uncertain whether the moulds were used for different metals successively, each leaving a trace behind in the clay, or whether the pellets themselves were of alloyed metal. The moulds may have been used for casting the blanks from which the coins were made, or alternatively as a convenient way of preparing a coinage-alloy – so many pellets of copper to so many of silver etc.

Several sites in Britain, notably Camulodunum, Verulamium, and Bagendon, the Belgic *oppidum* near Cirencester, have produced similar mould-fragments, and there are also Continental parallels.⁴⁸ In all cases an exclusively pre-Roman dating seems sound. The Silchester fragments come from the old excavations, so very little can be said about them. The connexion of such moulds with minting was amply demonstrated in the case of the Camulodunum discoveries.

It is tempting to relate the moulds to the traces of silver-refining which have been found at Calleva, mainly in Insulae ix and xi. The remains consist of cakes of slag etc. from furnaces,⁴⁹ and very similar remains were found at the supposed site of a British mint at Hengistbury Head above Christchurch Bay,⁵⁰ associated with masses of cast coins but not with the type of mould just described. Unfortunately, the record seems to show that the Silchester material was found in purely Roman contexts (see p. 188).

Just over 30 British coins have been found at Silchester, and a few others near by. Three, two of gold and one of silver, are of un-

specified type and were discovered in the 18th century. Two more are of base gold, and were issued by the Durotriges, the tribe which inhabited modern Dorset. There are also three base-metal copies of these coins, as made at Hengistbury Head. The remainder of the list includes only one certain Atrebatian piece, a plated forgery of a gold stater, but one bronze coin is also probably referable to the tribe. The others include thirteen coins of the Catuvellauni (eight of Cunobelinus, of which four are plated forgeries, four of Tasciovanus, his father, and a plated silver coin of Epaticcus); a plated forgery of a Brigantian stater, and base coins of the Iceni and Trinovantes. There are also three Gaulish coins and one or two others which cannot be identified.⁵¹

The almost complete absence of Atrebatian coins is worthy of comment, more especially in view of what has been said about a Catuvellaunian invasion of the realm. The high proportion of Catuvellaunian bronze and forged staters in this list may, though not necessarily, imply annexation of the Silchester region. The Atrebatian princes were slow to issue bronze money, striking tiny silver minims instead. The extraneous bronze making up most of the list may therefore have been introduced as necessary small change, hailing mainly, as was natural, from the nearest source – the northern Belgic kingdom.

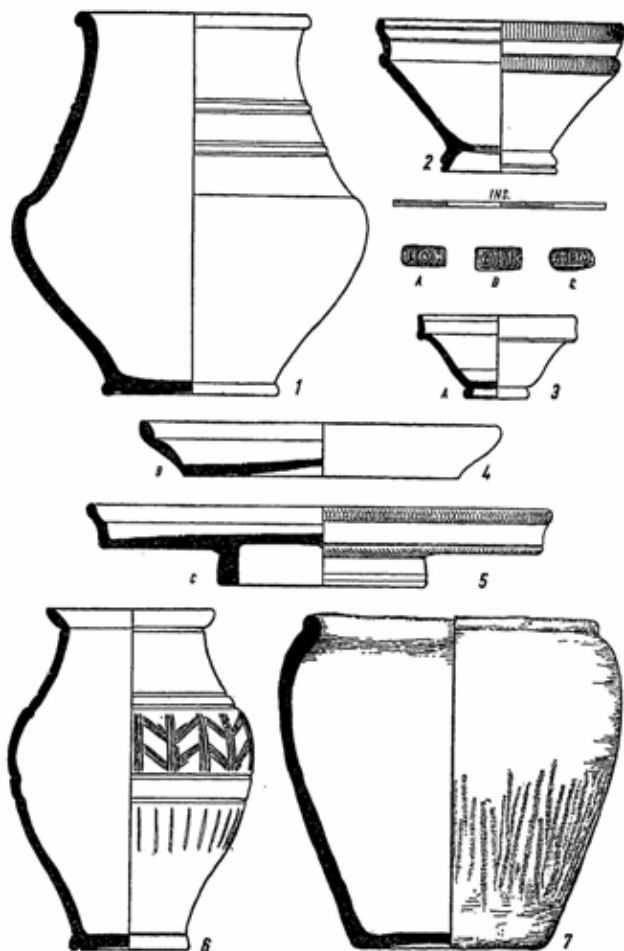
British coins did not go out of use upon the establishment of the Roman government, for the bronze is found in association with Roman coins as late as the 2nd century. It did in fact serve a very useful purpose, for in the early years of the occupation Roman small change was extremely scarce, and to meet the requirements of the currency it was imitated on a wide scale, particularly in the case of the *as*, a copper coin rather larger than a halfpenny. Over 70 copies – as opposed to only 3 genuine Claudian *asses* – have been found at Silchester, and British coins, tariffed perhaps at various fractions of the *as*, would have eked out the supply. Many of the coins listed, therefore, may not have been introduced to Calleva until Roman times, those of the far-away Brigantes, Iceni and Trinovantes especially.⁵²

For an extensively excavated and sizeable site the total yield of British coins is meagre, particularly considering the presumptive status of the town before the Roman invasion. It is barely an eighth, for example, of the total found at Camulodunum in a far smaller area;⁵³ and this comparison, which can also be maintained

in the case of the imported pottery briefly discussed below, cannot but convey the impression that Calleva was a poor place beside the Catuvellaunian capital. The reason may lie in the apparent history of this part of the realm as elucidated by coin-finds, for after about the year 25 Calleva could develop only as a provincial settlement of the Catuvellaunian hegemony, and would have lost its birth-right as an independent, metropolitan town. In the south, Selsey was safe from attack until the last years of Verica, and no doubt remained always the main capital of the kingdom, as the quantity of the British coins found there assures us.

When we turn to the pottery we are on firmer ground so far as dating is concerned. Being fragile, it does not survive in use as long as coins, and its presence on a site is a much more valuable pointer to occupation at a given period. The chronological value of a few sorts is high, that of Arretine particularly so. Arretine is a red-glazed earthenware of excellent quality as regards both art and technique, the equivalent of our own table-china. It was mass-produced and exported to all parts of the Empire, and even beyond, from manufactories at Arrezzo (Tuscany) and Pozzuoli (Campania) as well as from lesser centres; scraps have been found as far away as southern India.⁵⁴ Between about 30 B.C. and A.D. 20, it enjoyed a wide popularity and thereafter declined owing to competition from the similar, but technically superior, Samian ware of south Gaul. Its presence on British sites is therefore a very good indication of pre-Roman occupation, for practically every piece must have been exported here before the Gaulish and other markets were lost.

At Silchester, fragments of about 40 vessels have been found (cf. Fig. 5, opposite), including some with moulded decoration, of which the best are two pieces of a bowl by the potter *M. Perennius*.⁵⁵ The mass, however, comprises various forms of plain cups, bowls and platters, seventeen of which are stamped with their makers' names.⁵⁶ The extremely prolific firm of *Ateius* is represented by nine of these stamps, and three similar have been found in pre-Roman associations at Camulodunum where *Ateius* accounts for fifteen out of about thirty-eight legible Arretine stamps. The lists from the two sites are roughly parallel, but that from Silchester includes four potters not represented at Camulodunum, *Sextus Annius*, *Mena Avilli*, *Iucundus* and *Apronius*. The first three occur at the German frontier-fort of Haltern, and are assignable to about



5 ARRETINE (2, 5) AND BELGIC POTTERY. 1: Wheel-made cordon jar. 3, 4: *Terra nigra*. 6: Butt-beaker in red ware. 7: Handmade 'bead-rim' pot. A, B and C are potters' stamps referring to the vessels so marked; C is Arretine, ATEIM; A and B are Belgic, TAOR(?) and illiterate. (One-third actual size; stamps, one-half.)

11 B.C.-A.D. 9. They do much to extend the testimony of the coins of Tincommius and Eppillus, and examples are lacking at the Sheepen *oppidum* at Colchester presumably only because it was not founded until about the year 10.

To come now to the ware which supplanted Arretine, in the mass of Samian from Calleva there are several south Gaulish pieces which belong typologically to the reign of Tiberius (14-37). Some years ago they would have been taken with the Arretine to indicate pre-conquest trade. At Camulodunum, however, no south Gaulish Samian was found in pre-conquest levels, and it was generally abundant enough on the site to suggest that very little, if any, entered this island before the advent of the Romans in 43. Statistical analysis of the finds covering the period 43-61 made it plain that the invaders were using two old Samian bowls - i.e., typologically Tiberio-Claudian - to every new one.⁵⁷ It may be generally inferred from this that pre-Claudian Samian found on British sites was old stock, unloaded on a market deprived of such kinds of ware since the collapse of the Arretine trade.

A probable exception is a Silchester bowl stamped with the name of *Vitlus*,⁵⁸ a very early potter who had learnt his trade with an Arretine firm and who later started business on his own account in south Gaul. Technically the vessel is far inferior to Arretine, its glaze being dull and friable, and it is really little more than a trial-piece, barely good enough to sell, produced when *Vitlus* was making his earliest experiments with south Gaulish clays. Its typological date is supported by its primitive character, and both suggest that it was in fact a 'second' exported to an indiscriminating market soon after manufacture.

Arretine and Samian forms were extensively imitated in Belgic Gaul during the period 10 B.C.-A.D. 70, and were exported in large quantities to Britain (Fig. 5). The main wares concerned are black (*terra nigra*) and red (*terra rubra*), both of an extremely fine, hard earthenware well suited to the sharp outlines of elegant mouldings adapted from the originals. First-quality *terra nigra* - the commoner sort - is a masterpiece of ceramic art: hard, smooth, light-grey clay, given a glossy black surface by the application of bitumen; but, as demand outstripped the undeveloped methods of production, and competition with the south Gaulish Samian firms grew, the standard fell. The forms are mostly confined to platters, cups and bowls, which were extensively imitated in Britain in

various coarse wares readily distinguishable from the genuine imports.

The Gallo-Belgic potters also made a range of butt-shaped beakers and other vessels in fine white or creamy ware. The butt-beakers are generally decorated with bands of rouletting or other impressed patterns, and are sometimes large enough to hold more than half a gallon of liquid. They make their first appearance in the time of Augustus (27 B.C.—A.D. 14) and undergo a series of modifications in the shape of their rims, a feature which permits chronological distinction. They also were commonly copied in this country.⁵⁹

Remains of about 140 *terra nigra* and *terra rubra* vessels have been excavated at Silchester, as well as numerous butt-beakers and other products of the Gallo-Belgic industry. *Terra nigra* and *terra rubra* vessels often bear potters' stamps like their prototypes. Many are illegible owing to illiteracy on the part of the potter, or for other reasons, but those of 17 potters can be read,⁶⁰ among them *Acutus*, *Bitvolus* and *Boutus* who also contribute to the 160 stamps found at Camulodunum, and are known there in pre-Roman contexts. Some of the Silchester butt-beakers are of the earliest (Augustan) pattern.

As regards other classes of objects, there are singularly few which can certainly be referred to pre-Roman days. A badly-rusted andiron terminal in the form of a bull's head is poor of its type, but perhaps has the greatest claim to consideration in the present connexion; for the well-known 'Silchester Horse' (Fig. 1, p. 25, probably the handle of a bronze or bronze-bound wooden vessel) cannot be assigned securely to the Belgic period on grounds of artistic style alone. It might easily be as late as the 2nd century, although it compares quite well with the chalk-cut White Horse of Uffington.*

THE SILCHESTER DYKES

The pre-Roman phase of Callevan history cannot be fully considered without passing reference to the earthworks which lie to the south of the settlement. There are two principal⁶¹ dykes or linear defences, one of which is almost certainly truncated by the Outer Earthwork in its Rampier Copse sector, and the other ends on the fringe of some marshy ground a few hundred yards to the east.

* The 'Silchester Horse' is used as a device by the Silchester Excavation Committee.

Both of these have ditches on their east side, and seem designed to hinder access from this direction westward, whence there is an easy and level approach to the site itself. No excavation has taken place upon these dykes, and in any case it would probably be unfruitful; but their topographical setting and clear tactical purpose, as well as the apparent truncation of one example, combine to suggest a date in pre-Roman times for their construction. Similar dykes are known at Camulodunum.⁶²

CONCLUSION

The foregoing remarks conclude our survey of pre-Roman Silchester. Much of what has been said in this chapter is necessarily tentative in the extreme, for to tell a coherent story at all we have been obliged to enfold the salient facts in a web of theory. The two most important facts are the appearance of coins with a Callevan mint-mark within a decade of the birth of Christ, and the existence of a once-massive earthwork of Belgic appearance. The extent to which certain relics found at Calleva and elsewhere extend or limit the inferences to be drawn from these facts has also been discussed, and an attempt at least has been made to set Belgic Calleva in historical perspective as the metropolis of the northern extension of the Atrebatian realm, but not necessarily of the kingdom as a whole.

Broadest generalities apart, we know little or nothing of the town itself, and particularly lack any idea of its plan and houses. Only excavation can supply these details, and until it has done so we can do no better than recall the descriptions of British towns given by Caesar and Strabo – fenced enclosures amid the forests, large enough for men and beasts.⁶³

The Roman Town

The Roman invasion¹ of 43 was undertaken partly to increase the standing of the Emperor Claudius (41-54) at home, partly to end the Catuvellaunian supremacy in Britain, which held dangers for Gaul, partly for the sake of the mineral and other wealth, and partly perhaps (a poor fourth in the list) in response to the pleas of the exiled Verica. Moreover, disturbances following the death of Cunobelinus encouraged the exercise of rights conferred by the Caesarian conquest of 54 B.C. The first objective was Camulodunum, the surrender of which was received by the Emperor himself. Thereafter, the army split up and the task of subduing southern Britain was allotted to the II Legion Augusta, under the command of the future (A.D. 69-79) Emperor Vespasian (Fig. 7, p. 66). His biographer informs us that he fought thirty battles, stormed over twenty *oppida*, occupied the Isle of Wight, and conquered two exceedingly powerful tribes.²

It is unlikely that the Atrebates were one of these: their territory could be overrun in the name of liberation from alien rule, and 'Calleva Catuvellaunorum' (if our interpretation of the pre-Roman history of the town is correct) be returned to its former masters. But whether Calleva was one of the 20 *oppida*, we do not know. By the end of 44 or 45 it was certainly under Roman control – direct at first, and later possibly through the new 'ally' King Cogidubnus who reigned over the shadow of an independent kingdom from *Noviomagus* ('New Town' – Chichester) in Sussex.³ Verica's return seems doubtful.

By the end of the century, the death of Cogidubnus had brought any monarchic phase to a close, and ordinary native self-government on the Roman pattern (p. 100) had been introduced.

In the guise of conquest came the Roman Peace, under which capital could, for the first time, be expended on building, agriculture, industry, and general development: previously it was safely spent only on chattels. Cunobelinus, paramount king of

Britain, can have dwelt in nothing better than a shack; but the minor tribal notables of Calleva possessed comfortable, well-built houses and even the humblest site – to assess the matter on the lowest scale – produces manufactured goods, British and imported, in quantities never met in earlier times. As a province of the Empire, Britain became part of an organization which stretched from Scotland to the Euphrates and from Germany to the Sahara – 2,000,000 square miles where men lived under one government and one legal system, and where national feeling and pride of race went almost unregarded. When therefore we refer to the inhabitants of Britain in Roman times as Romans, we pay them a compliment which they studied to earn and came to consider their due, and which was officially recognized in 212 by the universal extension of the Roman citizenship.

The Callevans built in Roman fashion, used the Imperial coinage, wrote Latin – some may have spoken it, which is not the same thing⁴ – and some may have worn Roman dress and worshipped Roman gods. Last, and very important, the magistrates who dispensed Roman justice in the Basilica were Atrebatie, British and not Roman by birth. True Romans must always have been very few either at Calleva or in Britain generally, and certainly did not outnumber the other foreigners who came by way of trade or of the army to settle in the island.

The natural and chosen instrument of civilization was the town: Mediterranean life was founded upon it. Here, however, towns had scarcely existed in recognizable form, so when the early Roman governors undertook the transformation of the British scene, it was something almost entirely novel which they were striving to create – something, moreover, which had to come to terms with the agricultural basis of the economy. The resultant compromise is well shown by a town like Calleva, which was never closely built up in Mediterranean fashion and never wholly lost the open character of an early British *oppidum*. The attempt to construct a town barely succeeded even on the 100-acre scale of later Roman times. The economic potentialities of the site were either hopelessly overestimated or, as is more probable, ignored. If we could see Calleva in its prime, we should see nothing much more than a loose-knit village with farms, big houses, cottages, shops, hall, and places of worship and amusement, set amid gardens and paddocks – nothing which we should call a town, much less a city.

(A) *puellam*

(B) *VI. K[alendas] OCTO[bres]*

VI. K[alendas] OCTO[bres]

(C) *per tacus perfidus*
campester lucilianus
campanus conticuere omnes

scale: ins.

6 EXAMPLES OF ROMAN HANDWRITING, scratched on tiles before they were fired. *A*: *Puellam* – a remark about a girl. *B*: a date (= September 26th). *C*: Developed cursive hand – a writing lesson? – showing five personal names and a tag from Virgil's *Aeneid*, Book II, line 1, 'Conticuere omnes (intentique ora tenebant)' ('All fell silent and steadfast held their gaze'.)

The term 'city' is not indefensible in this context, for in late Roman times any walled town was a '*civitas*' (Pauly-Wissowa, *Reallexikon*, Suppl. I, p. 301) and that is where our word comes from; but its English connotation renders it unsuitable in connexion with Calleva, and in this book it is not used.



7 Vespasian (69-79), Commander of the 2nd Legion Augusta, A.D. 43-44 (from a *dupondius* found at Silchester).

THE OLD TOWN: 45-120

The evidence which can be assembled regarding the Romanization of the town shows how gradual, how almost tentative, the process was. But this is to anticipate. Our story depends partly on factual archaeological evidence, and partly on deductions from the old excavations which can often be interpreted with profit in the light of information recovered since, particularly during the 1938 and 1939 operations under Mrs Cotton.⁵ This aspect of our material needs, perhaps, a little clarification.

At first sight it seems a forlorn task to distinguish between early buildings and late on the basis of the 1908 plan – a palimpsest of four centuries of undated alteration and erasure; but it must be attempted, for this plan epitomizes our widest knowledge. Fortunately there is a key: the street-system, imposed over a large area of the town, the clear product of a single plan well executed, and with few additions. Moreover, one of the most useful of Mrs Cotton's results was the dating of the street-plan to some period within the end of the 1st and the early 2nd century. The lowest permissible date emerges from excavations on Street XXVI-XXII,* which passed over the ruins of an early hut containing a copper

* We do not know what the streets were called, and they are here referred to by the insulae which they skirt (a) on the North, for West-East streets, and (b) on the West, for North-South streets.

as⁴ of Domitian (81-96) and a 'trumpet' brooch (cf. Fig. 17, p. 113) of early 2nd-century date, as well as early 2nd-century pottery, in its floors. This street cannot therefore be earlier than these objects. The upper limit is supplied by the inner Roman defences (p. 74). As a whole, the street-plan is obviously earlier than the Wall and the gravel bank-and-ditch which preceded it on the same line: the plan shows how awkwardly these encircle the built-up area of the town, and in the northern half the defences actually truncate several streets. The underlying bank mentioned supplies all the dating-evidence we require at the moment: it contained Antonine pottery and a 'Britannia' as of Antonius Pius (138-161) and cannot have been built before about 160 at the earliest, and perhaps not until the end of the century.

The most important building at Calleva has a decided bearing on the date of the street-plan and helps to narrow the period of its construction. This is the Forum-Basilica, and it lies at an angle to the streets, enough to suggest that it belongs to a different phase of the Romanization programme. Architectural details (p. 94) and a humble scrap of Samian from its foundations⁷ combine to show that the Forum-Basilica was not in being much, if at all, before the end of the 1st century; while, had it been built after the street-plan, it would have been constructed in strict conformity with it. Some gap of years seems indicated between the two, and it is tempting to assign the streets to some time after 121, when Hadrian (117-138) came to Britain and 'put many affairs to rights' there. This was the period when the Forum of *Viroconium* (Wroxeter) was dedicated.

The plan shows that the Forum-Basilica was not the only building lying at variance to the alignment of the streets. About forty others, including the Public Baths (p. 101) and houses IX, 3 and XXIII, 2,* are truncated or otherwise affected by their passage and are therefore of an earlier date. About sixty more also lie at an angle to the grid, and most of them may belong to the Old Town. It would be rash to press the criterion of alignment too far in default of supporting evidence. What seems a safe assumption is that most buildings which conform are contemporary with the streets or later. Here again, a rigid application of the alignment test is

* Houses are henceforth quoted by Insula and Number following the *Archaeologia* reports 1890-1909 without further addition; 'blocks' are denoted by the addition of a *b*, thus IX, 23 is Insula IX, Block 3.

unwise; but it is not likely that exceptions would be numerous enough to alter the general picture, which is all that our yardstick permits us to discern. With fair confidence we may strip away the street-plan and conforming buildings as the uppermost layer of the palimpsest, leaving the Old Town, the first Roman century of Calleva, exposed to view.

About the time of the conquest, Calleva consisted of roughly ninety acres of ground enclosed by the massive bank and ditch of the 'Belgic defence', within which there were probably scattered huts and little more. The defence was now of course obsolete, and it was not long before its obliteration was put in hand – the Claudian filling of about 50 has already been mentioned.⁹ Nevertheless, it was a considerable task to level the earthwork, and it is clear from both the 1954 and 1955 cuttings that little headway was made until the early 2nd century when (probably under the impetus of the New Town Plan, as it has been aptly called by Lady Fox) heavy infilling began. Thus throughout the 1st century, the formative period of Roman Britain, the defence remained a very great barrier, and the road-engineers in particular made use of the pre-existing causeways at the entrances. More is said on this point in Chapter 9 (p. 200); but it was established in 1956 that the road westward from Calleva was laid out from the west entrance of the Belgic work, and although the indications at the north entrance are obscure, the same is likely to be true for the north road. On east and south, considerations of terrain made it impracticable to lay direct lines of road to the other entrances; the same applies to the south-west (Old Sarum) road, but this also crosses the defence by a special causeway, probably a later short-cut.

Mrs Cotton's excavations behind the north wall disclosed Romanized occupation and primitive huts dating from 45-65. The area concerned lies outside the 'Belgic defence'; within, particularly towards the centre of the old *oppidum*, occupation was probably dense: at least, there are large quantities of early Roman and Romanized pottery to be accounted for, and early timber buildings have been traced in the Forum neighbourhood (p. 135). For the remainder of the identifiable houses of the Old Town we have only to turn to those affected by the passage of the streets. Except perhaps in the simplest, a rectangular plan was general; the most primitive had wooden uprights set directly into the ground, a clay or gravel floor, and a thatched roof; a more evolved

form contemporary with it had uprights slotted into sleeper-beams and often a roof of tiles. The latest Old Town development was the frame-house on flint sleeper-walls, and most of our forty belong to this type. A more detailed discussion of the plans and constructional details is to be found in Chapter 6.

The most important public buildings were erected during this early period. The Forum-Basilica has already been mentioned, and the second to demand attention is the Public Baths building in *Insula xxxiii* (p. 101), lying in low, marshy ground near the 'Belgic defence', for the sake of the copious water-supplies and easy drainage to be found there. The building lies 9° away from the street-alignment, and as first built possessed an impressive 65-foot portico with eight Tuscan columns of Bath stone. When Street xx-xxxii was marked out, it was discovered that this portico projected about five feet into the roadway and it was demolished, the stumps of its columns being buried under 18 inches of road-metal (Pl. 7, p. 48). The roads were new, the Baths were old: had it been otherwise, some means of preserving their façade would have been sought. The date of the original Baths building is unknown, but a tile from the cess-pool stamped with the name and titles of Nero (54-68) may conceivably refer us to it.¹⁰ If so, the Baths were the earliest large Romanized building in Calleva, indeed one of the earliest in Britain. Perhaps part of the sum of 10,000,000 sesterces (say £125,000) which the Emperor's tutor Seneca invested in British loans went into it.¹¹ But this is all guesswork, and the direct relevance of the tile is uncertain.

Three or four temples (p. 119ff.) were almost certainly built at this early period. The two in *Insula xxx* and another in *Insula xxxv* lie askew to the street-grid. That in *Insula vii* may also be of similar date, since a coin of Vespasian was found in one of its walls; but on the whole this is unlikely.

The imposition of a regular street-system presupposes that such streets as already existed were hopelessly irregular. This is fully borne out by the haphazard siting of the early buildings and especially by ix, 3, which was truncated by the main east-west street and at one time had projected some way across the direct line between the east and west entrances of the 'Belgic defence' to which the street-alignment was tied. Some buildings, especially in the south-east part of the town, were admittedly constructed roughly parallel with the Baths — three of the four temples quoted

are cases in point – and there may have been some kind of planned ‘suburb’ in this quarter beyond the ‘Belgic defence’ and extending inside it. The siting of the remaining buildings on xx–xxxii, however, discourages this suggestion; although xxxii, 3 is on a similar alignment to the Baths, the intermediate building xxxii, 1 lies at an angle to both.

It is in fact questionable whether many built streets existed before the adoption of the grid we know today, and a haphazard, irregular layout would not have encouraged their appearance even if it had been possible to connect all the various early buildings by streets. The main east–west street – the Roman road, in effect – was no doubt metalled, but as we have seen, there was at least one kink even in this, at ix, 3. The truth of the matter is that the natural gravel surface, like that of Silchester Common today, was hard and well enough drained for light traffic. As far as we know, no line of street was ever laid to the Amphitheatre Gate (p. 87) although the convergence of traffic there made metalling and subsequent remetalling necessary,¹² as at an ordinary field-gate today.

MID-ROMAN CALLEVA – THE STREETS AND THE OUTER EARTHWORK (THE FIRST ROMAN DEFENCE)

With the adoption of a regular street-system and the alteration or replacement of many earlier buildings, we reach the second (and full) stage of the Romanization of Calleva which, as a mark of its success, may have culminated in an improvement in the legal status of the town (p. 76). The following chapters of this book are mostly devoted to the various aspects of life during this period and later, so that our present remarks may be almost confined to formal history.

What were the streets like? To begin with, they were laid over a much wider area than that enclosed by the Wall. The intersection of two (x–xviii and xxvi–xxxii) has been traced beyond the Wall on the north-west, and their continuations have been followed to the Outer Earthwork, the first certainly Roman defence. As aerial photographs show, the main street, xiii–xxx, also projects on the west and runs as far as the Outer Earthwork; the Roman road leaves it at the entrance of the ‘Belgic defence’. Other streets in the northern half of the town obviously also projected; but in the southern half the plan seems more complete.

Haverfield thought that the great square bounded by Insulae x, xxi, xxxv, and xix marked the limits of the original grid,¹³ and the irregularity of certain streets to the east of the area seemed to support this idea. It is now known, however, that these streets were wrongly planned; aerial survey has shown that they are quite regular, and the correct line is shown for the first time on the town-plan used in this book (see folder). Nevertheless, the idea seems basically attractive, and a new 'Haverfield square' might be formed by Insulae xii, xxii, xxxv, and xix. The streets to the east and south of this seem incomplete – vi–xxxi is certainly badly aligned, though early¹⁴ – and the westward continuation of xxvi–xxii beyond the intersection mentioned is well off the true alignment.

The streets themselves vary in width from less than 20 feet (for minor streets) to about 25 feet in the case of the two main thoroughfares xiii–xxx and xxiv–viii. The streets received scant attention in the old days, and were mostly found only in order to obtain a safe dumping-ground for spoil. As to their structure, therefore, our information is not very extensive. Street xxii–xxxv, opened in 1955, was about a foot thick, made of several layers of gravel make-up, its surface extremely hard and compacted – the workmen compared its excavation with digging through the Bath Road at Newbury. The surface of the street was flat, with a marked camber at the sides, and a central hollow was all that remained of a drain to carry storm water and no doubt household slops. It would have been timber-lined at one time. Another drain runs down Street vi–xxxi.¹⁵ It was about three feet wide, six to twelve inches deep, and took the storm-water drainage of the Forum. Good aerial photographs often reveal many others – thin, dark lines where moisture briefly remains in the centre of the parched bands of corn above the streets.

The Outer Earthwork encloses about 230 acres (Fig. 4, p. 53). In Rampier Copse, to the south-west of the walled town, its state of preservation is astonishing. The ditch is 40 feet wide and 10 feet deep, with a small counterscarp bank in places, and the rampart – the *Rampier* – is 30 feet broad and 20 feet high. The total elevation was therefore in excess of 30 feet.¹⁶

The ditch is quite unlike that of the 'Belgic defence': it is steep and V-shaped, with only a small flat bottom. Its sides have been chamfered off. The upcast forms the nucleus of the bank, which was

made up to the necessary height by material scooped from the surface within the enclosure. This double structure can be seen to good advantage where Wall Lane cuts through the Earthwork on the north-west side of Calleva. Shallow quarry-scoops can be seen in Rampier Copse.

As completed, the Earthwork possessed a flint revetment on its outer side, and traces of this have been found in every section opened. In Rampier Copse there was also a clay-and-wattle revetment where the builders found a strong spring of water.

The planning of the Earthwork is interesting (Fig. 4). Except on the south, the 4,000-yard circuit was laid out in a series of straight lengths like the 'Belgic defence' and the later Wall. On the north-east, a bold sweep along the brow of the slope takes the line from its north entrance to a corner just beyond the Amphitheatre, where a southerly alignment begins and runs as far as The Beeches, a small coppice about 200 yards east of the Town Wall where Col. Karslake identified the Earthwork many years ago.¹⁷ It then turns south-west and west to its south entrance, clinging all the time to the most advantageous course across the brow of the eastern slopes. From Church Lane to Rampier Copse there is a pronounced re-entrant owing to marshy ground, avoided also by the Silchester-Winchester road. In Rampier Copse the direct line is resumed, but the Earthwork again bends inward a little farther on. Its course thence for some distance northward was obscure until 1956, when a trench opened for another purpose encountered the filled ditch on the west side of the top of a small wet valley running south-east, avoided by the Silchester-Old Sarum road. This is on another alignment, and it is now known that the Earthwork bends inward at Rampier Copse to cross this valley at a suitably high level. In view of the other re-entrant on the south, this course is curious; but it permits a clear sweep up to Wall Lane, whence a short length completes the circuit.

None of the entrances has been excavated and much work needs to be done on the Earthwork generally before its problems are solved. One thing is certain – a Roman date; and from the 1939 evidence for its build, on analogies from elsewhere, a post-Boudiccan date of A.D. 61–5 was preferred to that of the Claudio-Neronian period of 45–65, though it was not thought to be much later. It was, however, noted that the latest level for its construction was not clear and that the evidence was quite insufficient to disprove

such a later date.¹⁸ The 'Belgic defence', however, has a great bearing on the date of the Earthwork, which may not have been built until the 2nd century, when the streets had been laid out. Firstly, the 'Belgic defence' was not obliterated by 61, nor indeed until half a century later, and could therefore have been refurbished if necessary. The amount of ground which it enclosed was quite sufficient for the needs of those days. Secondly, the street-plan is obviously aligned upon the two main streets coincident with the four 'Belgic' entrances. Now, had there been a street-plan before the Earthwork was constructed, several anomalies would not have appeared – the angular extremity of the main street XIII-XXX beyond the 'Belgic' entrance on the east, the similar angular extension of XXIV-VIII on the south, and the curious state of affairs on the west, where the Roman road leaves the Belgic entrance at an angle but Street XIII-XXX carries straight on to a dead end against the bank of the Earthwork. Moreover, it seems reasonable to suppose that the 'Belgic defence' would have been systematically obliterated upon the construction or planning of a larger defence, whereas this did not in fact occur until roughly the time when the streets were laid out.

There is something very grand in the two-mile sweep of the Outer Earthwork which accords much better with the ideas of Hadrian's day than with those of the time of Nero. The suggestion needs corroboration; but in any case, within a generation or two the Outer Earthwork was seen to enclose too much ground and it was abandoned.

THE OUTER EARTHWORK 'ANNEXE'

Another enclosure appears on the aerial photographs west of the Outer Earthwork, and an entrance through it is visible a short distance to the south of the Silchester-Speen Roman road. The enclosure was examined in 1956 in the hope that it would prove to be Belgic, since the Roman road ignored the entrance and appeared to cross the ditch on a broad causeway of its own. The danger of theorizing on the basis of aerial photographs was, however, swiftly exemplified by the discovery that the earthwork was interrupted for the passage of the road and was itself therefore Roman. It soon became clear that the only reason why the road ignored the entrance was because this was of later construction – made, it

seems, for convenience of access to a large gravel-pit just beyond, the site of which can still be seen today. The ditch was already half-filled and the defence – if defence it was – obsolete at the time.

The 'annexe' is triangular. Its eastern side is formed by the straight north-south run of the Outer Earthwork across the neck of the Silchester promontory, and the other sides by prolonging the Rampier Copse and Wall Lane alignments of the Outer Earthwork. These lines meet in a wide, rounded right-angled corner. The simplicity of plan is not unimpressive. The bank was all pushed back into the ditch by about A.D. 200 or else has been ploughed off in recent centuries, and the only superficial indication of the enclosure is the long, straight hollow of its ditch near the junction of the Silchester-Reading road and Wall Lane. The ditch is about 20 feet wide and 7 feet deep, V-shaped like that of the Outer Earthwork, but of course smaller. The very wet digging-season of 1956 made it difficult to obtain any positive evidence of the date of construction. At present we do not know whether it is wholly external to the Outer Earthwork or preserves a line originally planned for the Earthwork on the west, abandoned because of the excessive area enclosed. The 'annexe' ditch could have had only a military purpose, but a military annexe does not seem to be readily explainable. If, on the other hand, the present western sector of the Outer Earthwork represents its builders' second thoughts, the curious siting of the Earthwork on the west, noticed above, is more understandable. It is, however, reasonably certain that the Wall Lane sector of the Earthwork would not show an inward bend away from the 'annexe' line if this had existed for any length of time.^{19*}

THE SECOND ROMAN DEFENCE

The grandiose Callevan street-plan was never fully built up, and apart from ribbon development along the Silchester-Speen road and probably elsewhere, most of the town was included within a circle of 300 yards' radius centring upon the Forum. By the last few decades of the 2nd century it became apparent that the town was unlikely to expand further and, as the Outer Earthwork lay

* Since this was written, it has been suggested that an original Outer Earthwork embodying the 'annexe' may not have been a *defence* but a *boundary* of the town-area. Soil-samples examined by Dr I. W. Cornwall also suggest that the Earthwork is of two distinct periods of build.

far beyond this limit, the question arose of constructing a new defence closer to the built-up portion of the town. The first form which it took was a bank and ditch rather different in pattern from the Outer Earthwork. The bank was much wider – about 45 feet – but only 8 feet high, no doubt with a substantial palisade on top. The ditch was 22 feet wide and 7 feet deep, of broad V-shaped section with no flat bottom. The gravel spoil from this was dumped about 40 feet behind the line of the ditch to form a nucleus for a setting-out bank afterwards made up to the required size by the addition of material from elsewhere. As mentioned above, this defence entirely underlies the Wall, which in fact is best understood as a kind of revetment to it. Although scientifically excavated only on the north, its ditch has been found in several places on the west²⁰ and some rough foundations on one side of the South Gate probably mark the site of one of its entrances.²¹ It cannot have been built before about 160 and may be somewhat later. Several towns appear to have been provided with walls at the end of the 2nd century, perhaps under the orders of Clodius Albinus (Governor 191?–197), who assumed the imperial power in 193 and called upon the garrison of Britain to further his claim on the Continent against Septimius Severus (193–211.)²²

THE TOWN WALL (THE THIRD ROMAN DEFENCE)

The ditch of the defence just described proved to have a clay filling, under which very little accumulation of silt was found: evidently but a short period elapsed before the defence was replaced by the Wall we know today. Archaeologically, this period is represented by coarse pottery from the wall-trench, mostly of 2nd- to 3rd-century date, including a piece of Samian *mortarium* which must be later than about 180. In the old excavations a very slightly worn *denarius* of Severus, struck between 194 and 195, was found almost certainly in the wall-trench and would bring the date of construction down to about 200 at earliest. Some fragments of imported Rhenish ware support this date.

The Wall is described in the next chapter.²³ It is possible to view both it and the underlying bank as two phases of a single plan to provide Calleva with satisfactory defences. The first step was to construct a defensible *enceinte*, a pressing necessity; the second, to replace it at leisure with permanent and up-to-date fortifications.

The nucleus of the older bank lies so far from the ditch that it might almost be suggested that a berm (later found to be too narrow) was planned from the first, to accommodate the thickness of the Wall.

LATE ROMAN SILCHESTER

Was Calleva a Municipium?

So far in this chapter we have been sheltering in the lee of modern excavation-results and the reader will have taken note of the intriguing possibilities which they suggest. To complete our story we must embark on a much more perilous and uncharted passage through the remaining Roman centuries and beyond, where certainties are few and difficulties many. Before proceeding, however, the status of Calleva may be considered in the light of a suggestion made by Professor Eric Birley, to whom the writer is indebted for permission to include it in this book. It has been stated that Calleva was the 'cantonal' capital of the Atrebatas, but strictly speaking it had no legal pre-eminence above any other settlements in the tribal area. It was, to use technical language, merely a *vicus* of the *civitas*. But whether it always remained in this condition is open to doubt, and the three inscriptions found at the temple in *Insula xxxv* (p. 121)²⁴ suggest that it did not. They name a *collegium peregrinorum Callevae consistentium* = *collegium peregrinorum c(ivitatis) C(allevensium)* (or the like) and this second form implies that Calleva was a *civitas* in its own right by the early 3rd century, when these inscriptions (to judge by their lettering) were set up: the point is that there is apparent reference to a *civitas Callevensium* and not *Atrebatum*, which would otherwise have been expected. The *Viroconium* (Wroxeter) Forum, for example, is dedicated by the *civitas Cornoviorum*, and a pedestal at *Venta* (Caerwent) by the *civitas Silurum* – i.e. by the corporate action of the tribes, and not by the corporate action of the inhabitants of either town.

Calleva and the 'British Empire' of Carausius

The main event in the 3rd-century history of Britain was the setting-up of an independent *imperium*, based in Britain, by the ex-admiral of the Channel Fleet, Carausius (287–293), a native of the

Low Countries (Fig. 8). The history of his reign is given elsewhere, and need not be repeated; but it is important to realize that Carausius, like any other Roman usurper (and there were many about his time) had no idea of setting up an independent state outside the Empire, although he obtained *de facto* recognition from 'his brothers' Diocletian and Maximian, the continental co-emperors.²⁵ He sought the control of a large part, if not all, of the Empire, and to this end began to suborn the garrison of the Rhine frontier by issuing coins in honour of the component legions. Some of these little propaganda-pieces have been found at Silchester.²⁶ But in 293 he was murdered, and the Roman government quickly saw its chance to recover the island from his successor Allectus. Preparations were entrusted to one of the two junior emperors Constantius I (293-306), father of Constantine the Great, and in 296 the invading fleets set sail. There were to be two simultaneous attacks²⁷ - Constantius was to land in Kent and march to London, and Allectus awaited him (as far as can be seen) at this obvious point; a second outflanking movement, led by Asclepiodotus, was to land in the Solent and thus neutralize the navy-base at *Claudentum* (Bitterne). Constantius seems however to have been prevented from landing, and the weight of the campaign fell on his lieutenant. Allectus rushed to meet him, and a decisive battle was fought - probably in the hilly country of the Berkshire-Hampshire-Surrey borders - in which Allectus was defeated. The recovery of the province was celebrated by the issue of a large gold medallion portraying Constantius's ultimate entry into London.²⁸

Two large coin-hoards at Crondall and Blackmoor near the line of the newly-found Chichester-Silchester road (as well as a third at Bitterne) have been connected with the campaign - in fact the Blackmoor hoard of over 29,000 *antoniniani* was for some years wrongly regarded as the pay-chest of the British army - and were probably hidden by the inhabitants of the threatened region.²⁹ Two hoards found at Silchester include no coins later than Carausius and so were deposited on an earlier occasion, no doubt during disturbances following his murder.³⁰

The effect of the campaign upon Calleva was probably disastrous. It was the nearest large town, and was open to sack either by remnants of Allectus's force (mainly, we are told, Frankish mercenaries who would have had scant respect for a British town) or by the victorious Roman army. Joyce cherished a romantic theory

that the famous bronze eagle which he discovered in the Basilica was the emblem of a legionary standard of the British army, the relic of a last stand against the troops of Asclepiodotus, intentionally hidden;³¹ but as will be explained in Chapter 4 this is unfortunately not the case. Nevertheless, the building itself bears every sign of pillage and partial destruction by fire: two distinct layers of burning were observed in some of the rooms, one of which may belong to this time;³² and of its adornments, both the statue of the guardian deity and the eagle show traces of wanton damage subsequently repaired (p. 98). Although the event indicated by these fragments of evidence is not formally dated, the rebuilding was in an inferior style and an arcade – a common 4th-century feature – seems to have replaced the lofty colonnade of the original building (p. 96).



8 Carausius (287–293) from an *aureus* found at Silchester. (It passed into private hands and was sold for a record price of one thousand five hundred pounds, in London.)

4TH-CENTURY NOTES

Partly owing to the influence of Professor Rostovtzeff (whose *Social and Economic History of the Roman Empire*, published in 1926, was inevitably coloured by the author's understanding of the Bolshevik Revolution) it was believed for many years that Roman-British towns were in a state of decay by the 4th century, from which they never recovered, and which an artificial 'renaissance' stimulated by Constantius I did little to repair. This condition was ascribed mainly to the enormous taxation in money and kind levied for the maintenance of armies continually engaged in rebellion, repression, or external war. The town councillors (*decurions* or *curiales*, p. 101) were responsible for rendering the exact amounts demanded but, although their burden was unbearably heavy, it is now realized that Rostovtzeff's picture is blacker than the available evidence allows. What really seems to have happened is a redirection of life away from the decay of institutions which

had formerly been encouraged as the pride of every municipality, towards a more realistically based economy. Britain was a reservoir of men and materials, and so long as its inhabitants continued to supply them the rigid and autocratic central government little cared how. The vigour of life remained – the thousands upon thousands of late coins from the soil of all the British towns prove it – but much of what the towns stood for had indeed already gone.

At Calleva there are indications that corporate life was by no means dead in this period. The reconstruction of the Forum may be regarded as part of the Constantian renaissance; but a dated alteration in the Public Baths (p. 108) may be up to half a century later than this. Moreover, if Hope is right in his general grouping of the alterations to this building, there were others still to come, which must be placed within the last few decades of Roman Britain.

The time was nevertheless one of increasing disturbance and weakening central rule. Of seven coin-hoards found at Silchester, four were deposited in the 4th century;³³ likewise two great hoards of smith's stock³⁴ which even more pointedly emphasize the general insecurity of the times, however great the pains of the central government to belittle it through the medium of the coinage. Such legends as *Virtus Exercitus* (The Valour of the Army), *Fel Temp Reparatio* (Restoration of Happy Times), *Gloria Novi Saeculi* (Glory of the New Age) or, simply, *Victoria Augg* (Victory of the Three Emperors) deceived as successfully as modern propaganda. Yet, despite a shocking history of Pictish and piratical raids in the second half of the century, life contrived somehow to flourish, and the fact illustrates its resilience to such pressures; but it was the resilience of ordinary people and not of government, as the several usurpations of this period show. The most important of the usurpers was Magnus Maximus (383–388) – Maxen Wledig of Welsh legend – who repeated the exploits of Albinus and Carausius, and fell, and with him the Wall of Hadrian which was never repaired again. Another is unknown to written history; he boasted the name of Carausius, and one of his coins – one of very few known specimens – has been found at Silchester. It is crudely made and stamped over an earlier coin. The extent of the power wielded by 'Carausius II' is unknown; but he reigned in the middle of the century, about the time of Magnentius's revolt in Gaul (350–353).³⁵

THE END OF ROMAN CALLEVA

Continued occupation of the town is marked by masses of late coins – some of the latest struck in the Gallic mints, and mostly worn – far beyond the end of the 4th century. Over 680 coins of the House of Theodosius etc. (379–395+)³⁶, including gold of Arcadius and Honorius, and silver (?) of the last British usurper Constantine III (407–411),³⁷ have been listed amongst the 12,500 coins from Calleva preserved at Reading Museum or at Stratfield Saye House, or else recorded in the literature and now lost. This is a very high proportion, and several cut-down silver *siliquae*, a *tremissis*-weight,³⁸ and numerous tiny copies of coins issued by rulers from the time of Constantius II (about 350) onwards or of the ever-popular earlier ‘radiate’ types have to be added to it. Some of these copies – *minimissimi* – are only 5 to 8 mm. across.

This weighty coin-evidence is further borne out by other finds from the soil of Calleva. There is plenty of late Roman pottery,³⁹ some vessels being dateable to about 400; there is also some glass, including two beaker-fragments precisely paralleled by a 5th-century find in the Saxon cemetery at High Down in Sussex,⁴⁰ and several ugly polychrome beads of a type common in Saxon and Frankish graves.

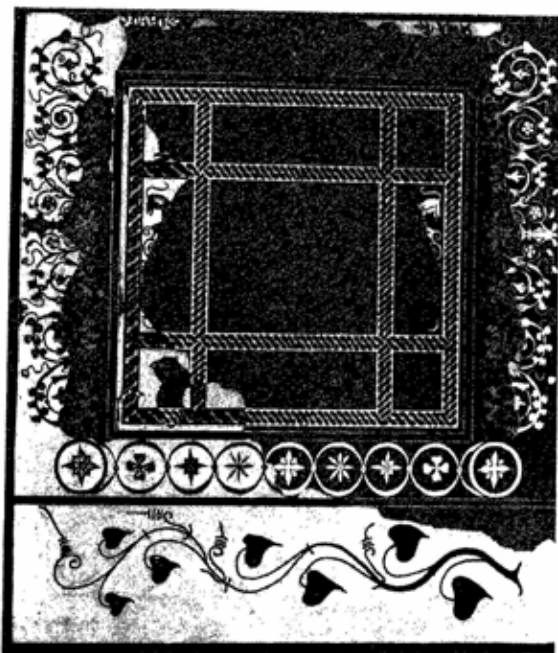
A small quantity of bronze trinkets, mainly buckles and buckle-plates (Fig. 9, p. 82), of the latest Gallo-Roman style forms one of the most distinctive classes of material to be mentioned in the present context.⁴¹ Not only are objects of this sort frequently found in cemeteries such as Vermand, in use as late as 400, but they also occur in the earliest Saxon cemeteries in Britain – those of the Upper Thames Valley, for example. Indeed, there is no reason why a last coin, of the Byzantine Emperor Justin I (518–527) or Justinian (527–565),⁴² may not indicate the survival of life at Calleva until the closing years of the 6th century. Coins of this sort have been found all over southern England and Wales, and although the circumstances of their finding are often obscure (this applies to the Silchester coin) there are thirteen at the Roman town of Caerwent; and there is contemporary pottery on several sites in Cornwall and Wales to show that some link, however tenuous, remained between the Mediterranean and the remnant of unconquered Britain far into the Dark Ages, perhaps throughout.

The most famous relic of 5th-century Calleva is however the Ogham Stone – the stump of a Roman pillar inscribed in Ogham

10 Restoration-drawing (by G. E. Fox) of the type of Corinthian capital used in the Basilica. When complete, the columns stood about 27 feet high.



11 Mosaic pavement in a house underlying House 2, Ins. xix. The floriated scroll is more delicate than is usual in British mosaics, and the *Smilax* spray is unique. The central compartments formerly held figure-subjects, but only traces survive. The mosaic may be 3rd century.





12 The 'Calleva Stone' (see p. 34),
from the temple in Plate 8.



13 Freestone head of Serapis,
from a garden at Silchester.

14 Hypocaust heating-structures in Ho. 2, Ins. XIX plan, (p. 158).



characters which was found in a well of Insula IX in 1893. This stone recorded the last resting-place of EBICATOS MAQUI MUCO—, *Ebicatus of the clan of Muco*—, perhaps a pilgrim from the western fringes of the island, perhaps an Irish mercenary hired by the last Callevans. The Silchester Ogham Stone is the most easterly by far of all known examples; it is early, and may be placed about 450.⁴³

The reader may not be familiar with the Ogham script, which is indeed a strange one, and of Irish origin. The letters consist of one or more (parallel) bars arranged in relation to a central demarcation-line – or, it may be, the corner of a squared block. Thus an E, like all vowels, is arranged across the demarcation-line and consists of 4 strokes; B is a single stroke on the right of the line; I, 5 bars across the line; and C, 4 bars on the left of the line.

So far, then, in our survey we have noted a strong occupation of the site continuing in the late 4th century and into the 5th, if not beyond. It is now time to leave the objects which illuminate these last years and pass to a consideration of a prominent earthwork to the north-west of the town, Grim's Bank on Padworth Common, about two miles from Calleva. It has been brilliantly placed in its historical setting by the late Chief Inspector of Ancient Monuments, B. H. St J. O'Neil.⁴⁴ The structure is very simple – a broad, V-shaped ditch on the west, with the upcast piled behind; the original total elevation was probably in the region of 15 feet. The dyke runs in a general north-easterly alignment, made of several straight sectors, from a definite beginning 80 yards north of the west road from Silchester to Speen, to the north or Alchester road. Marshy ground at its south-west end was probably sufficient reason for not continuing the work as far as the Roman road itself; and similarly the run is discontinued for about 450 yards along the edge of a small, steep valley at the edge of Padworth Common. Shortly before its termination at the Alchester road, a short branch-dyke leaves the main Grim's Bank and runs south-east; it is probably of later construction, made to connect Grim's Bank with another similar linear work on the other side of the Roman road – O'Neil's Grim's Bank II. Both this and two other dykes to the south-east, in Gravelly Piece and Stephen's Firs, face approximately north-west and appear to have no definite relation to Calleva such as Grim's Bank itself possessed: with its course athwart the north-west approaches to the town there can be no

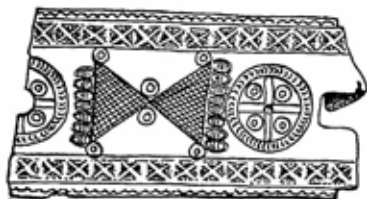
argument. Perhaps a settlement somewhere on Mortimer Common would explain the others, but their age is uncertain.

What of the date of Grim's Bank? In one part of its course it clearly traverses the bank and ditch of an Iron Age promontory entrenchment, and so cannot well belong to the prehistoric Iron Age. In fact its relevance to the Roman roads argues a Roman or just post-Roman date, almost certainly the latter. It is not the only post-Roman dyke: a group of others lies on Greenham and Crookham Commons, a few miles west of Silchester, facing west; and one of these has been dated to the post-Roman period by O'Neil, from a late 4th-century pot found in the silt of its ditch.⁴⁵ A third group lies between Aldworth and Purley-on-Thames. As to their purpose, they were obviously not primarily intended for military use: they were too easily outflanked, they are discontinuous, and where Grim's Bank crosses the Iron Age entrenchment there is no levelling of the earlier bank to ensure a clear line of sight. The dykes are boundaries, defensible at a pinch here and there, like inferior versions of the Walls of Hadrian or Pius. They delimit successive stages in the shrinking territory belonging to folk based upon Calleva or, more probably, the Greenham – and Aldworth? – series mark the outer perimeter of a sub-Roman enclave and the Padworth Grim's Bank its inner core – possibly even the *territorium* 'attributed' to Calleva in its Roman heyday.⁴⁶

From the Roman we pass to the Saxon side. The first Teutonic settlements in this country took place about the middle of the 5th century – the tale of Hengist and Horsa, and Aella of Sussex, is familiar to all. But, although Saxon penetration up the Thames from its mouth is not impossible, it has been clearly demonstrated by E. T. Leeds that the main settlement of the Upper Thames valley occurred from the direction of East Anglia – from the Wash via the Icknield Way. There are many early cemeteries in this region.⁴⁷ Early settlement here, mainly on the banks of the Thames, is sufficient explanation of the dykes around Calleva and the north-westward and westward directions which they face. There is no doubt from which sides trouble was expected, and the linear works fit perfectly into our picture of 6th-century penetration of the area.

There was no violent sacking of Calleva. The presence of a sub-Roman enclave no doubt persisted long, as we have seen, and in a steady devolution of material culture we may be sure that it left

nothing worth sacking behind it. No traces whatever were found of *widespread* burning or other havoc at the end, though it is true that the Forum-Basilica ended its existence in flames; nothing but the signs of decay. A tiny group of later Saxon objects – a dress-fastener; a few pins; a button-brooch⁴⁸ – remind us that by the end of the 6th century the period surveyed in Chapter I was at hand. Calleva was fast becoming *Sealhceaster*, the city of the willows; Rome had become a misty memory and the pulse of life beat elsewhere.



9 Late- or sub-Roman buckle-plate. Twice actual size.

Public Buildings

It is now time to turn to a more detailed consideration of various buildings at Calleva mentioned in the preceding pages. Pride of place goes to the Town Wall, the most prominent relic to be seen at Silchester today; we pass thence to the Forum-Basilica, Baths, and other public buildings, the temples being reserved for the next chapter.

THE TOWN WALL, EARLY 3RD CENTURY

The circuit of the Wall is a mile and a half. It forms a nonagonal enclosure of 107 acres. Its date has been explained in Chapter 3 (p. 75). The Wall¹ is $9\frac{1}{2}$ feet thick at the base, with a slight foundation of flint rubble which projects on the outer side, covered by a plinth of heavy stone blocks. The plinth is chamfered for long stretches on either side of the gateways. In its south-east sector, the Wall is carried on piles,² where it passes obliquely over marshy ground and the filled ditch of the 'Belgic defence',³ and the long sag in its superstructure on the north-west side, due again to the passage of the 'Belgic' ditch, is a remarkable sight often unheeded. There are several breaches in the Wall, made for the convenience of farm traffic, but the only spot where it has utterly collapsed through natural agency is on the south.

The Wall is composed of a flint-rubble concrete of great hardness, faced with courses of dressed flints (Pl. 3, p. 33). Every 2 or $2\frac{1}{2}$ feet, bonding-courses of large flat slabs are to be seen. For a few yards at a time, their place is taken by smaller slabs of the same material, set herringbone-wise, for, unlike the flints (to be had in unlimited quantities on the north Hampshire downs a few miles off) the bonding-stone came from Jurassic rocks at least 35 miles away. It is mostly Great Oölite (Bath stone) and Forest Marble, some from the Bath-Chippenham neighbourhood, and some from the vicinity of Malmesbury,⁴ both regions accessible by Roman road. The herringbone-work suggests that the stone was expens-

ive, above all to transport, and pieces shattered in transit or detached during the dressing of large slabs had all to be turned to good purpose. The local ironstone,⁵ an inferior material, ekes out the Oolite here and there, especially at the gateways.

The thickness of the Wall at the top was about $7\frac{1}{2}$ feet, the reduction being obtained by a two-foot offset on the inside, $8\frac{1}{2}$ feet above the base. The Wall is nowhere now preserved to its full height, which was probably about 20 feet, plus battlements. The greatest height which it now reaches is 15 feet near the South Gate. The centuries have also scored several feet from the width, so that the original facing has all gone except towards the base, where it has been protected by its own fallen ruins.

Behind the Wall there is a backing mound of earth and gravel, rising in many places to the present crest of the masonry. This mound is largely formed of the underlying bank, cut back when the Wall was erected, and superficially made up afterwards.

About every two hundred feet along the inside of the Wall there are rectangular projections or counterforts, 12 feet long, where the basal thickness of the Wall has been carried up unreduced. The projections are sometimes bonded with the main structure, sometimes not. They are too small for the bases of wall-turrets or for the emplacements of *ballistae* (spring-guns). Similar structures appear at Caerwent (*Venta Silurum*)⁶ and are explained as bases for stairs giving access to the parapet-walk from a track along the top of the mound. Both the Wall and the mound are too ruined to preserve any traces of the stairs or track. No true internal turrets⁷ or external bastions⁸ are known.

Ditch. Outside the Wall, and separated from it by a berm some 30 feet wide which masks the site of the ditch belonging to the Second Roman Defence, lies the ditch appertaining to the Wall. It is irregular, 25 to 45 feet wide, and saucer-shaped in profile. On its west sectors (where it can be seen to best advantage) there are traces of a gravel counterscarp bank,⁹ possibly spoil left over from the ditch-digging when requirements for the concrete of the wall-structure had been met. There is no reason to suppose that it represents a re-cutting of the ditch. At one point, a late 4th-century hut was set partly on it.¹⁰

How the roads crossed the ditch to the gateways is very obscure. The crossings could not be examined at either East or West Gates;

at the South, the result was perplexing,¹¹ and at the North, most of the structures recorded in the *Archaeologia* belong to the short period of the Second Roman Defence and were superseded with it. Traces of a made-up causeway were, however, exposed in the wall-ditch at this point,¹² and others may have existed at other gates.

Gates. The main gates lie at the four cardinal points of the compass. The East and West form a pair of similar plan, and so do the North and South. The first pair, traversed by the road from London to the west and Wales, were built to an imposing design with double carriage-ways and guard-chambers. The second pair served a road of lesser importance, and single portals without guard-chambers there sufficed. Three posterns and a sluice-gate are also known.

The West Gate¹³ (Pl. 4, p. 33, Fig. 10, below) is 54 feet wide, and set back 18 feet from the line of the curtain-wall, the ends of which turn inward to butt against it. On either side there is a pair of guardrooms with three- to four-foot walls, well-built of flint, tile and stone. The outer face of the Gate is aligned with the internal division between the chambers of each pair, which could thus be



10 Imaginative reconstruction of the West Gate, showing the Wall-ditch berm marking the site of the earlier ditch; the causeway; and the blocked southern portal.

carried up into partly-projecting towers. The two carriage-ways are 13 feet wide and 12 feet long, and were spanned by twelve-foot brick arches front and back.¹⁴ The intervening pier is 3 feet wide, and one of its boldly-moulded arch-imposts was found nearby. It contained a rectangular piercing at ground level, in which timber thresholds were seated. At either end of this, excavation revealed a simple means of exposing the ends of the thresholds so that they could easily be removed when worn out. Of the doors themselves, a cylindrical iron pivot-shoe was found, and also a length of iron strap which showed that they were about $4\frac{1}{2}$ inches thick.

At a late date, the southern carriage-way was blocked by a rude mass of stonework, including one or two carved pieces from some internal building then in ruins.

The East Gate¹⁵ differs only in points of detail, of which the most noteworthy is the fact that the curtain-wall does not turn inward to the gate, which is simply butted against its inner face. Signs of rebuilding were observed in the south part of the Gate, which is not parallel with the remainder.

The North Gate¹⁶ is recessed 24 feet, and the Wall turns inward to overlap its side-walls by about $8\frac{1}{2}$ feet. The passage was some 18 feet long and 13 feet wide, constricted by piers to carry eleven-foot arches. The South Gate¹⁷ is even more deeply recessed, and the returns of the curtain-wall overlap it by only 39 inches. A special means of carrying the rampart-walk over this Gate was therefore necessary; no doubt timber brackets were used.

At both these Gates the returns of the Wall are carefully faced with alternate bands of flintwork and ironstone, and are at present the best examples of Roman masonry to be seen on the site. Unhappily, preservative treatment is long overdue. They have received no protection since first exposed in 1873, and have worsened even since the writer came to know Silchester. The deep recessing of these two Gates was a measure at once for safety and economy. Attackers could be subjected to a heavy enfilading fire from the battlements on either side, just as if flanking towers had been built for this purpose as at the East and West Gates. The inferior plan however speaks eloquently of the enormous cost of building this defence.

The posterns are simple passages, arched, and with stone quoins. The Amphitheatre Gate¹⁸ was the first to be discovered, and two floor-levels have been identified there – curiously, since no street is

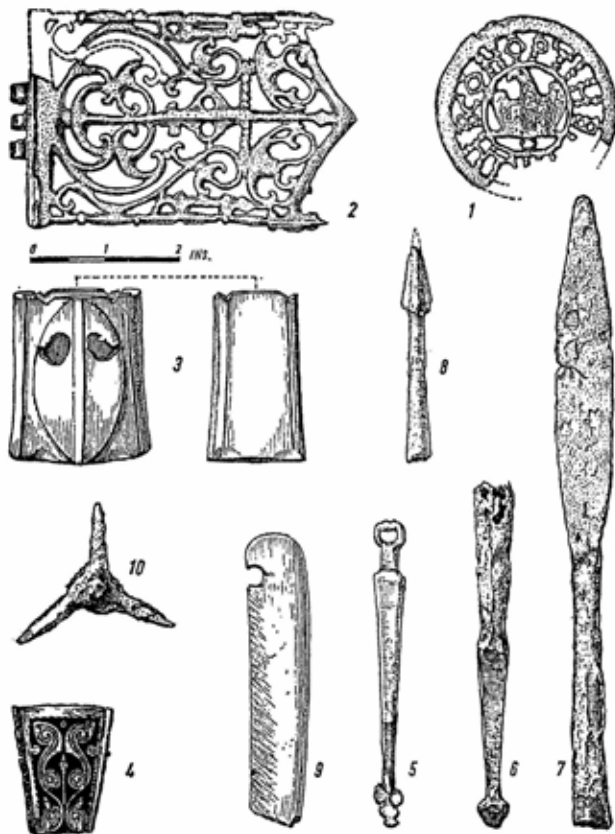
known to lead to this Gate. Better preserved was the South-west Gate,¹⁹ found in 1895. It was recessed nearly 4 feet from the face of the wall where, on either side, pilasters were set on extensions of the chamfered basal plinth. The outer arch was 11½ feet in diameter, the inner arch a little wider. A pivot-shoe and piece of strapping were found here as at the West Gate. At some period, the entrance was narrowed by a four-foot pier of masonry against the north side. This again included re-used or carved pieces. At the same time or before, the level of the roadway through the gate was raised, possibly in connexion with altered arrangements to carry it over the ditch outside.

The third postern²⁰ was found in 1938, in the north-east sector. It had been planned and begun, inasmuch as its quoins were laid up to the level of the internal offset of the Wall. At this stage, the opening was filled and the superstructure of the Wall carried across uninterrupted by an arch or a lintel. The mound behind was also never breached.

The Sluice-gate²¹ in the south-east sector, found in 1893, is a most unusual structure, the more so because it was constructed to carry away, not the drainage of the Public Baths in *Insula xxxiii*, for which a simple conduit seems to have sufficed,²² but that of the private baths of the *Mansio* in *Insula viii* (p. 116). The orifice is 50 to 54 inches wide, internally flanked by massive L-shaped piers of brickwork on stone bases. Each pier contains a vertical shaft lined with plaster, which carried the uprights of the heavy timber frame from which the gate was suspended. The gate itself worked in grooved wooden slides for which chases were cut in the piers. The backing-mound of the Wall was retained on either side by a row of posts against which side walls of brick were constructed; the space between these was floored with waterproof brick-mortar.²³

The sluice was apparently raised only in time of flood, for all normal drainage was accepted by a ten-inch channel below the sill of the wooden frame. This may however be an alteration, for, like other gates, the main passage was blocked at some time.

The Garrison. Guard-chambers bespeak a guard, and an account of this elaborate and massive defence would be incomplete without reference to its garrison. Incomplete however it must remain, for we have no information on the subject. It is possible that a small force of low-grade soldiers existed from an early period,



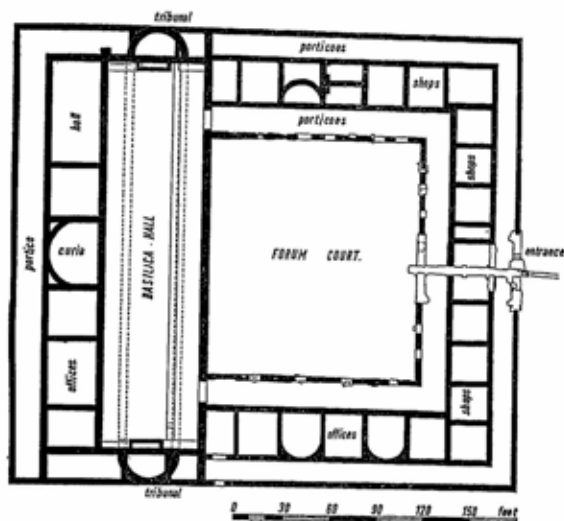
11 MILITARY REMAINS. 1: Bronze badge from standard. 2: Tinned bronze belt-tag. 3: Bone scabbard-chape with sliding back. 4: Bronze scabbard-chape with red(?) and blue champlevé enamel decoration. Alternatively, part of a hexagonal vessel (*Préhistoire II*, p. 145*f.*). 5: Bronze scabbard-loop. 6: Iron spear-butt. 7: Iron lance-head. 8: Iron arrowhead, triangular section. 9: Bone tip from composite (horn) bow. 10: Iron caltrop. (All one-half actual size.)

with police-work and fire-fighting as the main part of their duties (*vigiles*); such a force would also act as garrison, apart from whatever regular troops the central government might see fit to quarter at a strategic point of the road-system like Calleva. A few pieces of military equipment have been found (*cf.* Fig. 11, p. 89), but do not amount to much; they include a couple of swords, spear- and arrow-heads, a caltrop, buckles, belt-fittings, scabbard-chapes, and other small items. The most interesting is a roundel of cast bronze, one of a set of three attached to the standard of an auxiliary regiment. It bears the inscription OPTIME MAXIME CON – the sense of which is completed by the wording on the other two badges, examples of which have been found both in Britain and elsewhere. In full, the motto runs *Optime Maxime Con(serva) Numerum Omnium Militantium – (Jupiter) Best and Greatest, Preserve (Us) a Troop of Fighting Men All*.²⁴ This badge may have belonged to the standard of the Callevan garrison, but it is much more likely that it was a keepsake belonging to a retired soldier living in the town. The only object which can be directly associated with the garrison is the bone tip of a composite bow, found in one of the guard-chambers of the West Gate (Fig. 11).²⁵

THE FORUM-BASILICA, c. A.D. 100; rebuilt, c. 300?

The principal building within the Wall is the Forum and Basilica in Insula IV, covering nearly two acres of ground in its overall measurements of 275 feet from north to south and 313 feet from east to west.* It was discovered and excavated by Joyce between 1866 and 1871, and was re-examined in 1890–1892 with the scrupulous attention to architectural detail always expected from George Fox.²⁶ The building as a whole faces east. The Forum or market-place consists of a large open court surrounded by porticoes, shops and offices on three sides, and on the fourth and west by the Basilica or town hall – a great hall much larger than the Guildhall of London, flanked by a row of spacious offices including the *curia* or council-chamber of the tribe. The whole is surrounded by an outer portico (Figs. 12 and 13). Throughout, the work was of the best construction, with walls from 3 to 4 feet thick of dressed courses of flints with tile quoins and bonds. The east wall of the Basilica was 5 feet thick, to sustain the tremendous weight of that

* Unless otherwise indicated, measurements are henceforward given (1) from north to south, (2) from east to west.



12 Forum - Basilica, Insula IV (1892). Also the 'church' to the same scale.



part of the building. The roof was partly tiled and partly of the hexagonal Old Red Sandstone or Pennant Grit slabs familiar in the villa-regions of the west country. The ranges of the Forum probably stood about 45 feet high, and the Basilica about 70 feet high. On a clear day, the hills of the Thames Valley (9 miles across the woodlands to the north) might be glimpsed from the crest of its roof.

The plan outlined above is very reminiscent of that of the headquarters of a legionary fortress with its forecourt, cross-hall and offices. Like most Roman-British *fora*, it was most probably derived from this model, through the agency of the military architects whose services seem to have been made available to the local

governments.²⁷ A similar influence is seen in the case of the Public Baths.

The Forum. The Forum court was a thickly gravelled area 142 by 130 feet, surrounded by porticoes on the north, east and south. The west side, as mentioned above, was occupied by the Basilica, and was of plain construction so far as is known, though once probably decorated by statues and inscriptions, all of which have followed the garlands which used to bedeck them on feast-days into dust and oblivion. Fragments of the Bath stone columns, of Tuscan style, supporting the pentice roofs of the porticoes have frequently been found and it is calculated that they stood 14 or 15 feet high. Masses of dressed stone on the sleeper-walls of the porticoes show that the columns were set at intervals of about 14½ feet – an intercolumniation demanding a wooden architrave. On the east side, however, a forty-two-foot concrete substructure, centred upon the main entrance, interrupts the colonnade. It corresponds to a similar foundation in the line of the outer portico opposite. From its position and size, and the large blocks of hewn stone which were found on and about it, it clearly supported a monumental arched entrance of which scarcely any other indications survive. A Tuscan base, too large for the Forum, too small for the Basilica, was found near by and may have belonged to it, as also a large pilaster-capital discovered by Joyce at the South Gate. Somewhere upon this monumental entrance – which, it may be conjectured, resembled a triumphal arch – would have been placed the dedicatory inscription of the whole building. Five fragments survive, the pitiful relic of one of the most splendid inscriptions of Roman Britain. No single piece contains an entire letter, parts of an E and a B, P or R being discernible amongst them. The E was about 11 inches tall. The letters are superbly cut on 1½-inch slabs of grey-green Purbeck Marble, the guide-lines still visible in places. The slabs were polished, and their appearance and legibility enhanced by the red paint used to fill the letters. A speck of this – *minium*, vermilion – may still be seen on one of the fragments. The text would have contained a dedication to the ruling emperor – Trajan (98–117)? – by the *Civitas Atrebatum*, the *Government of the Atrebates*.

To return to the ranges of the Forum, there are on the east side ten chambers, 22 feet wide, most of them nearly square. The cen-

tral chamber is larger, and was a spacious vestibule forming part of the grand entrance. A narrow room next it on the north was for service use, or perhaps housed stairs leading to the upper storey which the foundations could easily have sustained and which the scale of the Basilica demands. The other rooms were probably shops, open-fronted, with masonry counters as at Pompeii or Doclea.²⁸ Here, and in the north range, Joyce found much ordinary occupation-rubbish from which he deduced in detail the use to which each room was put.²⁹ We cannot go so far, although his suggestions are in the main plausible and give a very lively picture of the building when it rang to the sounds of market-day eighteen hundred years ago.

The north range contains six similar chambers. The westernmost was almost certainly the vestibule of a side-entrance, and is balanced by a chamber in the opposite range. Another room has been subdivided, and a third reduced to a hemicycle where there may have been a statue.³⁰

The extra width of the south range proclaims its greater importance, as does its central suite of one square and two apsidal chambers, the latter most probably vaulted in a building of this style. These rooms appear to have been kept very much cleaner than the others, for little was found in them. It is likely that they were public offices. The tax-office and the office of weights-and-measures would in particular be more conveniently sited here than in the Basilica.

Parts of the Forum lie within a few inches of the surface, and the plough has thus been able to tear up almost every vestige of flooring with unhappy facility. Here and there patches of brick-mortar were found, bedding for the one-inch red tile tesseræ found scattered about. Few of the essential arrangements for drainage survived. The central drain was conducted through the main entrance of the Forum into the ordinary street-gutter beyond; the portico gutters were probably of wood, like so many drains in this town, and left no traces strong enough for Joyce's men to discover.³¹

The Basilica. As uncovered, the Basilica presented everywhere (to quote Joyce's words) what could only be described³² as 'the comminuted smash of a great fabric' — its roofing tiles broken to pieces scarcely larger than the palm of one's hand, and intermixed

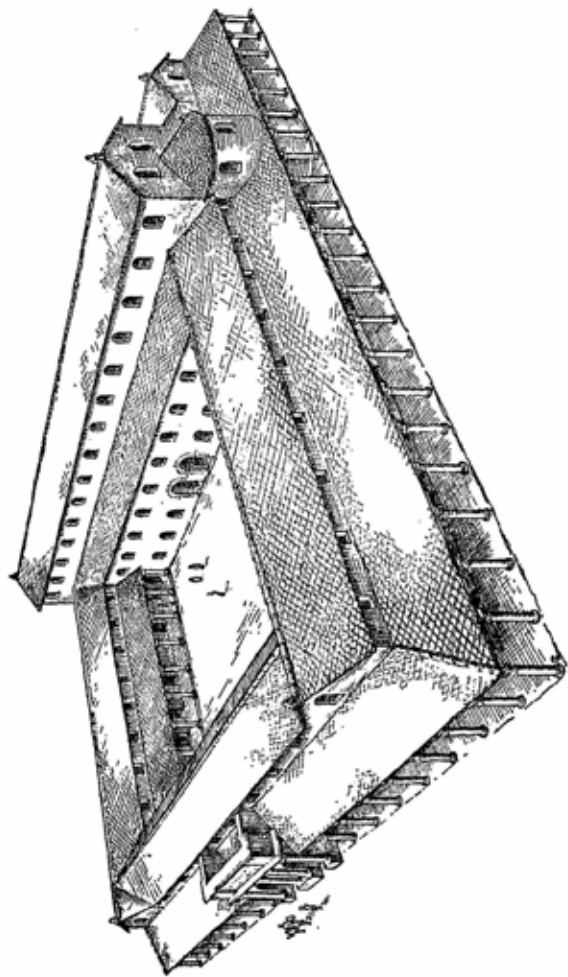
with thick layers of mortary rubble and burnt woodwork. The entire charred beams of a ceiling or upper floor were found in one room.³³ These conditions, combined with the inadequate stratigraphical record, make it difficult to be precise on many points of interest. Nevertheless, the two major periods of construction are clear, from which a sketch of what it was like in its former grandeur can be drawn.³⁴

The First Basilica. The great hall is $233\frac{1}{2}$ by 58 feet, with apsidal recesses at a raised level at the north and south ends, 27 feet wide and 18 feet deep. On the west of the hall are six chambers of varying size, the central and principal being also apsidal, 38 feet wide and $38\frac{1}{2}$ feet deep. The entrances to the building were at either end of the great hall, from the inner porticoes of the contingent ranges of the Forum. If there was a third entrance, in the middle of the east wall opposite the western apse, it was not of such monumental design as to require additional foundations. A smaller hall at the north-west corner of the Basilica may have had separate access from the street on its west.

The span of the great hall was too wide for a single roof to cover in those days, and recourse was therefore had to a structure supported on two rows of pillars. The effect was thus much like a cathedral, marked internally by a nave 27 feet wide, and aisles, externally by a central and two side roofs. Joyce brought to light only one sleeper-wall on which columns had been erected; but Fox was able to show that this belonged to the second Basilica, the original pair of sleeper-walls having been almost entirely grubbed up in antiquity.

In passing, it may be noted that Fox discovered some of the holes where timber scaffolding had stood during the erection of this colossal building.³⁵

Like those of the Forum, the columns were of Bath stone. Only fragments were found, some in the building itself, others scattered over a wide area of the town. They were of the Corinthian order, and had stood 27 feet high; Fox calculated that 42 of them were required. The capitals, which measure $43\frac{1}{2}$ inches across the volutes and 38 inches in height, are of a modified form developed in the Rhineland during the first century A.D., and cannot well be dated before the turn of the first and second centuries. They are characterized by the stiff rendering of the acanthus foliage and by



13 Imaginative reconstruction of the Forum and Basilica from the north-east.

small central volutes enfolded between the supporting leaves on either side and a tiny spray (Pl. 10, p. 80).³⁶ The masons who carved them doubtless came from the Rhineland, and other towns in Britain also exhibit their handiwork.³⁷ Numerous pieces of sandstone on which they had sharpened their chisels and gouges were found in the excavations.³⁸

If the work was in proportion, architrave and entablature brought the height to something over $33\frac{1}{2}$ feet from pavement level. Above this again there would have been a row of clerestory windows on either side; the exact height of the eaves is not ascertainable, but vaulted ceilings in the apsidal recesses at either end of the great hall require it to have been in the region of about 57 feet. With a roof of normal pitch (about 30°) the total height therefore approached 70 feet above the ground. The roof-beams may or may not have been hidden by a coffered ceiling as Fox suggested: no evidence was found.

The recesses at either end of the great hall were undoubtedly judicial tribunals. The colonnades coincided with the springing-points of the apses, the outer walls of which interrupt the external portico. The western apse was almost certainly the *curia* or council-chamber. Its lighting is somewhat problematical, and it may be (as Fox thought) that the colonnades were interrupted opposite to form a lofty transept through which a flood of light could be admitted from the eastern side. This arrangement occurs in the Vitruvian basilica at Fane.³⁹

The Second Basilica. The date at which the Basilica was burnt down and rebuilt has been discussed in Chapter 3 (p. 78). The new structure conformed to the previous ground-plan, new masonry of tell-tale quality being observed almost throughout the western range. The main change, as mentioned above, was the replacement of the colonnade-foundations by a single substructure of more massive build. It was now intended that the whole weight of the roof should be borne by a single row of supports, and it is probable that the original colonnade-foundations were not adequate for this purpose. The change is so radical as to lend colour to Fox's belief that arches now took the place of the earlier entablature.

All the surviving columns were probably once more re-erected. They were few: the stone is one particularly destructible by fire. To muster the required number, a new capital had to be carved.



15 The 'Silchester Eagle', a bronze found in the Basilica in 1866.
16, 17 Bronze figurines. *Left*, a girl flute-player. *Right*, the guardian spirit of a family in the guise of a *paterfamilias* sacrificing.





- 18 Italian(?) pillar-moulded bowl of blue, yellow and white glass.
 19 Decorated (moulded) Samian bowl by *Primus*, a potter of S. Gaul.
 20 Rhenish glass beaker. 21 Gaulish beaker of dark grey pottery.



and this was found in use at the farm as a horse-block.⁴⁰ It is of noticeably rougher work than the originals. The new colonnade encroached upon the apsidal tribunals, and these were accordingly taken down to foundation level and rebuilt as rectangular recesses, in front of which little projecting platforms were made.

The Decoration of the Basilica. The floors of both buildings were of cement laid with the usual red tesserae, except at the apses of the first Basilica. The south tribunal yielded some white tesserae, which suggest that its floor was thus paved; the other apses would have corresponded. At a late date, the floor of the great hall was paved with tiles, some of which were still in place when found. As to wall-decoration, most of our evidence seems to refer to the later state of the building; but as marble veneers were still in use then, it is likely that they also found a place in the decoration of the first Basilica. The platform in front of the south tribunal still retained a piece of its Purbeck facing,⁴¹ and a great quantity of this was found amongst the rubbish, including moulded scraps from cornices and panels. The *curia* was partly lined with white Italian marble; one piece was mitred to fit the corner of a panel. Green and white Pyrenean marble found in Insulae I and II may also have come from the Basilica. Coloured frescoes too formed part of the decoration. Gaily-painted fragments were turned up in great profusion – green, pink, yellow, red, salmon, and white, some with ornamental bordering and some with draperies.

Joyce also found some fragments of window-glass, greenish in colour, from the panes of the clerestory.⁴² The window-embasures were filled by wooden frames having iron stars or crosses at the corners, which served instead of putty to retain the glass. An iron frame with similar stars has been found at Strasbourg, and another, of more decorative form, at a Swiss villa; but although the stars are not uncommon on British sites, they appear always to have been set in wooden frames.⁴³

Inscriptions and Statues. Several inscriptions have been found from time to time in the Forum-Basilica area, the best-known being Stair's discovery of 1744 (p. 35 and Fig. 2, p. 34). This stone misled early antiquaries into believing that a temple of Hercules stood on the spot. From the description given, however, it appears that the stone was a piece re-used in some reconstruction-work or

alteration, a supposedly fractured surface bearing signs of having been sawn.⁴⁴ Of the inscriptions which can fairly be regarded as having been set up in the building, the main dedicatory panel has already been described; few others are at all susceptible of explanation. They are very imperfect, having been cut on thin Purbeck slabs which smashed into small pieces upon falling. One contains a reference to the *Civitas* and two others may also do so; a fourth was considered by Joyce to name a *Colonia Belgica*, but this is unlikely; the relevant letters are]NIAE BE[, perhaps part of a personal name. A fifth refers to a *libertus* or freedman.⁴⁵ A Christian leaden sealing found in one of the Basilica offices is mentioned below (p. 130).

The principal statue which adorned the building was of exceptionally interesting type, and was perhaps set up in the *curia*. It was a representation in Bath stone of the guardian goddess or *tutela* of the Atrebatas, twice life-size, her head encircled by a crown taking the form of a city wall or tower.⁴⁶ Three fragments survive, the largest a mere lump showing part of the crown, and locks of hair at the back of the head. Two dowel-holes are to be seen in a broken surface, and show that the statue was carefully repaired after having been smashed at some period, probably when the Basilica was destroyed. *Tutela*-statues are not common; this example is so far unique in Britain, although a relief of the *tutela* of the Brigantes is known.⁴⁷ An extremely fine bronze *tutela*-head was found in the Seine at Paris (*Lutetia Parisiorum*) and stone examples at the German frontier fort of Holzhausen and at Saverne near Strasbourg.⁴⁸

An important bronze statue also stood in the Basilica, portraying a first-century emperor, larger than life-size, clad in armour. The only fragment we possess, wrenched from its parent mass, takes the form of a lappet from the armour skirt. This is of a type superseded in the 2nd century by one of a less cumbersome design.⁴⁹ Also found in the Basilica is part of a strip of cast bronze with acanthus foliage, partly silver-plated. It is 3 inches wide, $\frac{1}{2}$ inch thick, and $4\frac{1}{4}$ inches long. It has been suggested that it came from a pilaster-capital adorning an official chair, but it seems altogether too massive for such a purpose, and more probably formed one end of a frieze or border to the pedestal of a bronze statue.⁵⁰ A moulded bronze frame dug up by Stair near the hemicycle of the north range of the Forum may have come from a similar pedestal.

Its weight is given as no less than 47 lb.; it was 33 inches square and $\frac{1}{4}$ inch thick in parts.⁵¹

Joyce's 'great prize' from the south-west chamber of the Basilica range has been left to the last.⁵² This is the bronze eagle found in October 1866⁵³ under the upper of two layers of burnt wood in that room. The eagle is preserved at Stratfield Saye House. It is 9 inches long, 6 inches high, and weighs 3½ lb. (Pl. 15, p. 96). The casting is hollow, with the legs separately made and inserted into place. The modelling is excellent, that of the eyes and brows especially, and was achieved entirely by the *cire-perdue* casting process and not by *ciselure*. According to Joyce, one feather bore traces of gilding, but none is now visible; the patina is excellent, grey-green but very thin, and Joyce probably mistook a gleaming spot of the underlying metal for gilding.

The attitude is as poised for flight, the head raised and inclined to the right. The wings are missing, but were extended and raised, for the modelling of the feathers underneath is good and was meant to be seen. The undersides of both feet are curved from front to back and also inclined inward, as if to grasp an orb. Such a bronze is certainly not of British work, and an Italian origin in the 1st or 2nd century is most likely.

Points of particular interest concern the wing area. The back of the bird has been greatly modified, all that is left of the original casting being a small oblong area on the right, with a broken edge where the right wing was attached. The back contains a rectangular rebated slot, around which the feathers have been boldly chiselled away. This is secondary work for the seating of another pair of wings after the loss of the original pair. On the right side there is a thin ridge of bronze, run in to support the new wing. The metal is of a different colour from that of the body of the bird, and the feather-impressions which its upper surface bears show that the workmanship of the new wings was rough.

A torn and raised edge at the lower left-hand corner of the slot is connected with the ultimate fate of this interesting bronze.

Drawing parallels from Trajan's Column, Joyce identified the eagle as that of a legionary standard, intentionally hidden in the Basilica after the defeat of Allectus near by in 296. This attractive suggestion cannot however be reconciled with the history of the bronze, to which Joyce seems to have paid small attention: for the repair brings it fully into line with the *tutela* and possibly other

objects from the Basilica. Unfortunately too, no certain examples of legionary eagles have yet come to light for comparison. Small eagles and other birds are fairly common, and found a place in the ornamentation of official thrones etc. Larger bronze birds, including eagles, are also known, fragments of two having been found at Silchester itself.⁵⁴ These militate against the possibility put forward by Joyce, but it is not easy, on the other hand, to determine the purpose of the eagle. The best suggestion is that it formed an adjunct of a larger bronze statue, perhaps being held in the hand, and certainly being more or less free-standing. The careful all-over working implies that it was meant to be seen from all angles, and at a height not greater than a few feet.

A wing of similar work, but a little smaller in scale, was found at S  z  ria, near Lons-le-Saunier (Jura) in 1819. It is ancient, and may have come from a bronze eagle, although the same style of feathering is seen on a bronze swan in the Louvre, and on a bronze found in Queen Victoria Street, London, E.C., in 1873 but now lost. Joyce saw this object, and was struck by the resemblance to his own discovery. A drawing, however, supports comparison with a pigeon of similar size found near Evreux and not with the Silchester Eagle.⁵⁵ These few objects comprise the acceptable bronze parallels so far found. Other bronze birds exist, but they are either forgeries, of obscure provenance, not sufficiently like, or too small.

LOCAL GOVERNMENT

We may leave the Forum-Basilica with a brief account of the arrangements for the administration of affairs.⁵⁶ The central government of the province of Britain consisted of a governor (*legatus Augusti propraetore*) and his staff. Financial affairs were conducted by a *procurator*. Both these officials were appointed directly by the Emperor, and served for a few years only. For the greater part of the period, the governor also acted as commander-in-chief of the army. Under Severus (193-211) Britain was divided into two provinces, and Calleva lay in *Britannia Superior*. In the 4th century it was further subdivided, and the administrative posts changed in name and status. Military and civil affairs were also separated.

To save trouble and expense, the pre-existing tribal units of Britain were allowed to remain with certain territorial re-groupings. Their governments were remodelled on the Roman plan.

The government of each *civitas*, nominally independent in local affairs like the county councils today, comprised an authoritative body known as the *ordo* (senate) of 100 decurions, which chose the annual magistrates called *duoviri iuredicundo* and *duoviri aediles*, i.e. two to look after legal affairs and two to look after public works. Admission to the *ordo* was by property qualification. The Callevan *ordo* met in the *curia* described, and the *duoviri iuredicundo* sat to hear their cases in the tribunals at either end of the Basilica. They attended to all legal cases except the most important criminal and civil cases, which went to the governor's court. Before the general extension of Roman franchise in 212, the four magistrates would have been given Roman citizenship upon election. It cannot be too strongly emphasized that the administration was entirely in Atrebatian hands, and that the Roman government exercised only supervisory powers. British local government, or American state-government, supplies a rough parallel.

The taxation in cash and kind levied by the central government was collected through the *ordo*, whose decurions were made responsible for the amount. At first, it was light and reasonable enough; later, it became a heavy burden upon the decurions. Local taxation for the upkeep of public ways and buildings was also assessed by the *ordo*.

Of paid local-government officers we know nothing; nor do we know the names of any of the magistrates or decurions. A shrewd guess can however be made as to one family prominent in public affairs, Roman citizens as is shown by their 'three names' – the family of the *Tammonii*. It has left two inscriptions behind it, one a gravestone set up by Titus Tammonius Victor to his wife, Flavia Victorina,⁶⁷ and the other the Stair inscription of 1744 (Fig. 2, p. 34), set up by Titus Tammonius Vitalis, son of Saenius Tammonius.

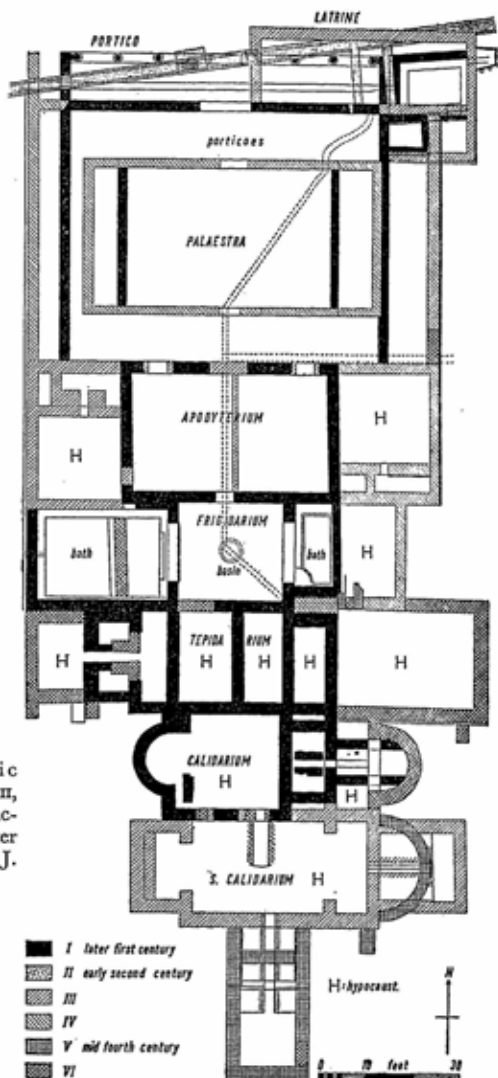
THE PUBLIC BATHS, LATER 1ST CENTURY

All towns of any size boasted suites of public baths, and those of Calleva lie in *Insula xxxiii*, south-east of the Forum, on the south side of a declivity which exists in that part of the town. The building was excavated in 1903-4.⁶⁸ Reasons have been given above for believing it to be the earliest large structure of the town, and the only one of importance constructed so near the 'Belgic' *enceinte*, which probably runs hard by its eastern side and conditions its

somewhat curious alignment. The need for copious water supplies and easy drainage obviously governed the choice of site.

Bath-buildings everywhere show signs of constant alteration and improvement, and so provide their own evidence of the value set upon cleanliness and the social amenities which they offered. The Baths of Calleva are no exception. The original plan was overlaid by numerous additions which W. H. St J. Hope was able to rationalize into five groups, making six structural periods in all. From the first the accommodation (later extended) comprised (a) an entrance portico; (b) an exercise-yard or *palaestra*; (c) an undressing-room, as the Romans called it, or *apodyterium*; (d) a cold-bath room, *frigidarium*; (e) a warm room with sweating-chamber annexed, *tepidarium* and *sudatorium*; (f) a hot-bath room, *calidarium*. The building was set north and south, with these chambers arranged in an orderly row leading one into the other, and in the first period covered about 7,500 square feet; the plan (Fig. 14, opposite) is a very common one, especially on military sites (cf. p. 91).⁵⁹ The heating was by the hypocaust system, in which a cavity is constructed below the floor and connected to a furnace built in an outside wall at foundation-level. The heat and hot gases generated here circulated under the floor, warmed it, and passed up small chimney-flues embedded in the walls. The flues were made of box-shaped tiles cramped to the walls and covered by a plaster rendering. How the flues terminated is uncertain, but it seems possible that they were led at right-angles through the walls to debouch under the broad eaves of the roof.

The elaborate nature of the accommodation makes it clear that the procedure of bathing was on the Turkish plan and did not resemble the humble domestic routine of today. The so-called Turkish bath is in fact an adaptation of such baths as those under discussion, visible in cities of the Eastern Roman Empire with which the Turks were in contact. Since Turkish baths are no longer very popular in this country, and the public swimming-baths of modern towns have neither gymnasia nor heated rooms, a brief description of the ordinary method of bathing may be useful. The *palaestra* was available for preliminary exercises, such as ball games, of which the Romans were very fond, and for social intercourse generally. After their fill of this, the bathers proceeded to the *apodyterium*, undressed, and walked straight through to the first heated room, the *tepidarium*. The raised temperature promoted

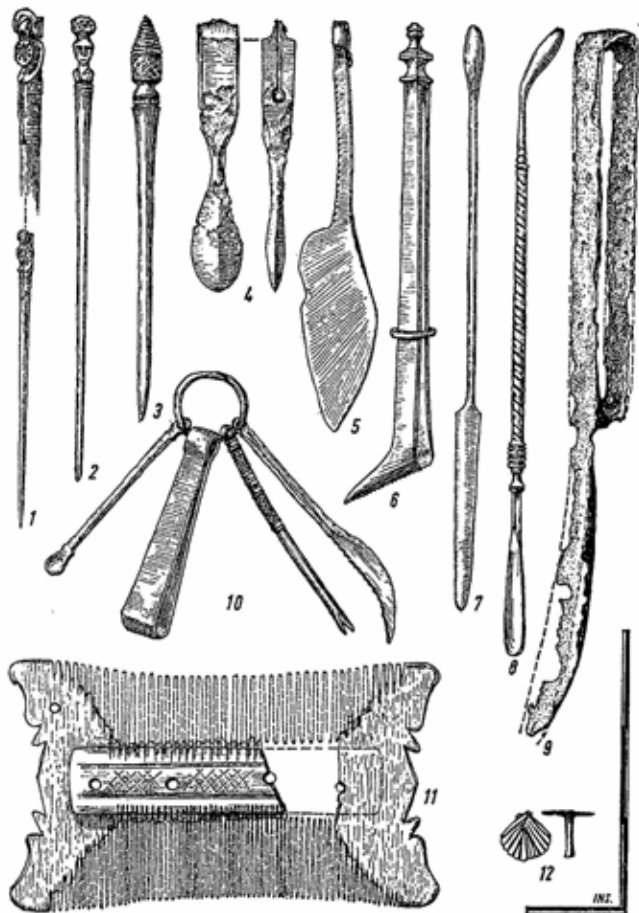


14 The Public Baths, Insula xxxiii, 1903-4. Constructional periods after G. W. H. St. J. Hope.

the perspiration induced by exercise, and the process was completed in the adjoining, very hot *sudatorium*. There, or in the *calidarium*, the sweat, dead skin and dirt were scraped off with a strigil. Several of these have been found at Calleva, notably an iron specimen, placed conveniently for the stoker's use by the furnace of a domestic hypocaust in House xxiii, 1.⁶⁰ After a dip in the hot bath, the bathers returned to the *frigidarium*, and freshened up by a turn in the cold bath or by a shower, either of which served to close the pores of the skin. An apartment added to the *apodyterium* has been identified as an *unctorium* for massage with olive oil, as a final touch. Many pieces of small spherical glass oil-bottles, with little handles from which they might be suspended by a cord, have been found at Silchester. Soap had probably not been invented. Even shaving, when popular in the 1st and 4th centuries, was done with the aid of water only.⁶¹ Tedious and uncomfortable the process must have been – especially with razors like those found on our site – as we can infer from references to it in writers such as Martial. A clean shave must have been a rarity without the brutal help of tweezers.

The most common toilet articles of all betoken a widespread attention to personal hygiene. These are bronze nail-cleaners, tweezers and ear-picks, found singly and in sets. Double-sided bone and wooden combs and fragments of white-metal mirrors have also been found, as well as numerous surgical or quasi-surgical instruments and accessories, such as would have been used by barber-surgeons congregating at the baths for custom. They include spatula-probes, scalpels, forceps, a retractor for pulling back the edge of a wound for inspection, and an artery forceps with serrated jaws and a sliding ring to hold them tightly in place. Among the accessories may be mentioned a little bronze pharmaceutical mortar and balances, Purbeck, green porphyry and greenstone palettes with bevelled edges, and a compartment-lid from a medicine-chest.⁶² Some toilet articles are shown opposite.

Since the baths were supported by local taxation, admission was either free or for an insignificant sum. The travellers who stayed at the *Mansio* in *Insula* viii, however, were provided with their own accommodation. Public baths were in general use amongst town-dwellers, rich and poor alike, and came perhaps to be the most democratic institution of the Empire. At Calleva, few houses had bath-suites,⁶³ for everyone expected to use the public accom-



15 TOILET AND SURGICAL INSTRUMENTS. 1: Bronze pin with 'zoomorphic' enamelled head and silver ring (Scottish). 2, 3: Bone pins. 4: Bronze scalpel handle. 5: Bronze razor. 6: Bronze artery forceps with slider. 7: Bronze *spatula* probe. 8: Bronze *ligula* probe, inlaid with silver. 9: Iron strigil. 10: Toilet set, comprising nail- and ear-cleaners and tweezers. 11: Bone comb. 12: Head of a silver pin. (All five-eighths actual size.)

modation, and thought it no disgrace to do so. No more illuminating sidelight could be thrown upon the difference between public life then and now. How the habit of bathing became ingrained is exemplified by the dozens of country villas far from any town. Nearly all had their little suites modelled upon those of the great cantonal edifices, with all the necessary accommodation in miniature, decorated with mosaics and frescoes.

Description of the Baths (first state). The many alterations finally produced a building of the greatest complexity, and it is proposed here to describe only the original layout of the 1st century A.D., and to comment afterwards on the more important modifications. The entrance portico (Pl. 7. p. 48) was 65 feet long and 8 feet wide, with an octastyle façade of Tuscan columns of Bath stone. The bases of three remained in place, and showed that there was a wider central intercolumniation probably devoted to an imposing entrance. The *palaestra* behind was 28 by 45 feet, with ten-foot porticoes all round. The *apodyterium* was 24 by 41 feet, with white-plastered walls and a floor of *opus signinum*. The *frigidarium* was in two divisions, together 20 by 52 feet. The cold bath lay at the east end, and was about 16 by 8 by 3 feet, with a flight of steps at one corner. In the middle of the room was a large Purbeck basin, 5 feet across and 3 inches deep, set flush with the floor; a drain led eastwards from it. This basin served for cold douching taken instead of the plunge. The floor of the *frigidarium* was of small bricks set herringbone-wise; the walls and bath were faced with waterproof brick-mortar and had a quarter-round skirting of the same material. The *tepidarium* was also in two parts, together 18 by 28 feet, and had the *sudatorium* on the west. This measured 14 by 16 feet and was separated from the main room by an antechamber. Although a hypocaust was found in the *sudatorium*, none could be traced in the *tepidarium*. It may have been entirely rooted up during the extensive alterations undergone by this chamber. Otherwise its function would have been served by charcoal braziers, the normal means of heating when no hypocaust was fitted.

Owing to the small size of the *sudatorium* there would have been no difficulty in maintaining its temperature at a very high level. During the winter of 1951-2, controlled experiments were made with a reconstructed hypocaust at the Saalburg, a frontier-fort of the Roman Empire about 20 miles north-east of Mainz.⁶⁴ The

room concerned was a living-room about 17 by 15 feet and some 2,500 cubic feet in volume. The floor was 8 inches thick, supported on pillars, and, by mistaken reconstruction in the time of Kaiser Wilhelm II (who was personally interested in the work) the walls were jacketed with flue-tiles, several columns of which served as chimneys, the rest being blocked. An installation such as this would obviously have a very great thermal capacity, and in fact the experiments showed that the floor absorbed most of the heat produced in the first 12 hours of firing. Its upper surface ultimately reached a fairly high temperature. As might be expected, this was greatest above the inner mouth of the furnace (104° F.) and lowest in the opposite corner (73°). The most interesting result of the experiments was the maintenance of an even room-temperature of 73° day and night after $1\frac{1}{2}$ days' firing had been completed; this shows that, once achieved, the desired temperature could easily be kept up by stoking twice a day and no more. The fuel used in the experiments was charcoal, and the consumption a couple of pounds an hour. In antiquity, brushwood and all sorts of rubbish were burnt, and the furnaces were built to a larger size than would be requisite for a compact fuel such as charcoal. The furnaces had no grate, there being a top draught only.

The room-temperature reached in the experiments is higher than that recommended today, as far as this country is concerned, but of course depends within certain limits upon the degree of firing. With heavy stoking, a bath-hypocaust like that of our *sudatorium* might reach a level which forced the bathers to wear slippers on their feet. Indeed, in a furnace lined with suitable fire-resisting material such as brick, a bath-fire might reach $1,500^{\circ}$. Many hypocausts, including numerous domestic examples, are not constructed of such materials and the intended degree of heat was therefore not high.

The last chamber was the *calidarium*, 20 by 31 feet, with an apsidal west end and a recess for a hot bath directly above the debouchment of the furnace on the opposite side. The apse probably contained a basin of cold water, where bathers might refresh themselves from the stifling moist heat of this room.

The latrine lay outside the north-east corner of the *palaestra*, and was reached through a lobby. It was 15 by 19 feet, with walls separate from those of the main building and out of alignment with them. It may therefore have been an afterthought, portable

receptacles having at first been intended. A drain ran round all four sides of the room, 18 inches wide and 3 feet deep, made of brick-work. The seats were arranged above this. It was flushed by a stream which was led through a conduit under the floor of the entrance portico from the higher ground to the west. There was a squarish wooden cesspool to the east of the latrine, with an overflow probably on the line of the existing stream. It was here that the tile bearing the stamp *NER CL CAE AVG GER*, *Nero Claudius Caesar Augustus Germanicus* (p. 69) was discovered.⁶⁵

The alterations have not been dated except for Period II (when the front of the building was remodelled, see p. 69) and a modification assigned by Hope to his Period V. This is a particularly interesting case, demonstrating the continued vigour of corporate town life in the middle of the 4th century. The evidence consists of a coin of Crispus (317-326) included with others in the filling of a superseded hypocaust at the west end of the *apodyterium*,⁶⁶ which was extended to take in this area. The whole chamber was newly paved with tiles set in a one-inch cement bed sealing all below. If Hope is right in his grouping, the work still being undertaken in the middle years of the 4th century was extensive. By this time the building had already served eight or nine generations of Callevans, and throws into prominence the considerable age of many a Roman building before ever soil came to rest above its ruins.

The alterations comprising Hope's Period III are particularly important. It was a time of enlargement. The latrine was doubled in size and permitted now to encroach upon the once-inviolable street-line almost as much as the original entrance-portico (Pl. 6, p. 48). The *apodyterium* was divided into two, and the hypocaust chamber which was to be superseded in the 4th century built on its west side. The main addition was at the south end of the building, however, where an entire new *calidarium* arose beside the first. In Hope's Periods IV and V there was again enlargement. The *tepidarium* was left much alone, but the rest of the already ageing structure was torn about to increase the width of the *apodyterium* and *palaestra* to 80 feet. The cold bath was removed to the west side of the *frigidarium* (Pl. 5, p. 48), the other, Hope suggests, being filled up. What these alterations meant in terms of re-roofing can easily be imagined.

Period VI was, in a measure, a return to the days of old. By

accident or design, the south *calidarium* was obliterated; the partition in the undressing-room was removed; and the only new work involved the insertion of a new hypocaust into the *tepidarium* and the construction of an apse at the east end of the north *calidarium* to balance the original apse on the west.

One of the most curious things about this catalogue of alterations cannot unfortunately be proved. This is the apparent correspondence between (a) the building and demolition of a second *calidarium* and (b) the building and demolition of a partition in the *apodyterium*. The first is not commensurate with accommodation elsewhere provided in the Baths, and the second does not seem readily understandable unless it can be suggested that the modifications as a whole were directed towards providing separate accommodation for men and women to bathe at the same time. Otherwise, they would have had to bathe at different times of day.⁶⁷ When, later, the south *calidarium* was pulled down for reasons of economy, or perhaps accidentally set on fire, the arrangements of earlier days had once more to come into play. It is possible that simple wooden partitions existed in the *frigidarium* and *tepidarium* and, in opposition to Hope's belief, two cold baths could have been in use at one time. The stumbling-block to this otherwise attractive theory lies in the absence of any private means of access to the south *calidarium* from the rooms to the north. None was found, and the excavation seems to have been thorough.

The Superstructure. Little can be said about this. Nothing was found to suggest that the rooms were vaulted, although they may well have been. One interesting find was a large piece of fallen masonry from the apse of the south *calidarium*. It preserved part of a window embrasure about $3\frac{1}{2}$ feet wide and somewhat higher. The opening was splayed, and there was a flat tiled lintel and a relieving arch above it. Such windows must have been glazed to retain the considerable heat of this room, and glass fragments were found. The lighting of the other chambers must have included windows in their east and west walls, and possibly clerestories as well. Large side windows were probably inserted into the *apodyterium* and *calidarium*, lying as they did at either end of the block. The walls were plastered internally and stuccoed outside, and at one period the *tepidarium* had wall- as well as floor-mosaic – a rare feature.

Owing to its demolition in antiquity, very little was left of the south *calidarium*, but embedded in its hypocaust floor a curious flue came to light, leading from the stoke-hole to the walls of the western alcove opposite, and formed mostly of a triple row of half-round or *imbrex* tiles. At the alcove, branches led to the south and west walls and there stopped. The flue was thus about 50 feet long, and had a gentle rise of 5 inches over that length.⁶⁸

Several similar flues have been found in bath-hypocausts, notably on military sites such as Chesters on Hadrian's Wall. A few villa-baths also have them. In the present instance, it was suggested that the flue conveyed fresh air to ventilate the stifling and no doubt foul atmosphere of the *calidarium* by means of vertical conduits joined to the ends of the branches and terminating at or above floor level. The air thus conveyed would be warmed but untainted by the poisonous gases circulating in the hypocaust cavity, its passage facilitated by the slight upward slope of the flue. The same argument was put forward by Sir George Macdonald in the case of Chesters.⁶⁹

Against this theory is the siting of the intake at the very worst point, namely at the *præfurnium* or stoke-hole, deep always in ash and dirt. The less cogent objection that in no known case do parts of the vertical conduits survive must also be considered. It is not impossible that the channel may be a kind of drain designed to carry off chance flood-water – in the low-lying Silchester Baths a very sensible provision – and to accept condensed moisture and leaks from above. A pool in the stoke-hole was preferable to a pool in the hypocaust cavity, and could be more easily baled out. In the case of one such installation, the flue stopped just inside the hypocaust cavity, which was not large, and in another communicated directly with the drain which took the dirty water from the plunge-bath.

In connexion with this arrangement we may turn to the *tubulatio* which undoubtedly existed in the heated rooms. To jacket a wall completely with flue-tiles (*tubuli*) would seem to make for improved draught and, in consequence, heat. This is not so. Only the lowest parts of the *tubulatio* survive in most cases, but at the Stabian Baths (Pompeii) the installation is complete enough to show that the rows met overhead.⁷⁰ This rules out the possibility of a through-current, and the hot gases merely stagnated in the *tubulatio*. Moreover, as isothermic measurements at the Saalburg



16 JEWELLERY. 1: Filigree gold ring with almandine garnet. 2: Filigree gold earring with setting for emerald bead. 3: Gold earring with emerald bead. 4: Bronze thumb-ring with paste setting imitative of nicolo. 5: Engraved signet-stone (plasma) with figure of a *Genius* sacrificing. 6: Bronze bracelet. 7: Bronze bracelet with hook-and-eye fastening. 8: Turquoise glass bead with brown inlay outlined in white and containing blue spots (pre-Roman: a late Hallstatt or La Tène type). 9: Silver torque or collar.

show, the contribution of the *tubulatio* to the temperature of the room was negligible, whereas the proper chimney-flues incorporated into the *tubulatio* acted as satisfactory radiant surfaces though to a lesser extent than the floor.⁷¹ *Tubulatio* is seldom found except in bath-rooms and may not have been connected with the heating arrangements at all, but with the insulation of the walls from damp: in bath-rooms a greater threat to the stability of the structure than in living-rooms, for obvious reasons. The subterranean flue at Silchester and other sites may therefore have been connected with the *tubulatio* in some way.

Finds. Among the objects lost by bathers three gold earrings of middle or late Roman date may be mentioned. One consists of a suitably bent shank with a claw setting for an emerald bead. Another is set with an almandine garnet. The third is more elaborate, a rosette of filigree work with a claw setting in the middle, probably for another emerald. Emeralds came mostly from Egypt in antiquity, and were generally badly flawed and opaque. The examples from Silchester, four in number, are made from truncated crystals ground smooth on the outside with emery and pierced. Another find, which must have been pretty when new, was a bone hair-pin with moulded head, around which gold foil was wrapped. A large number of plain hair-pins was found. Among other finds was a small uninscribed stone altar. Brooches and jewellery are shown in Figs. 16 and 17.

Such were the Public Baths of Calleva, and such they are under their mantle of soil. More potent than fancy to populate them with their crowds of noisy bathers, their attendants, masseurs, barbers, and so on is an eye-witness (or ear-witness) account from the pen of the philosopher Seneca. Writing from his lodgings in some provincial town, he says:

Rot me if it is as necessary as it seems for a recluse to have quiet in his studies. ... I am actually living over a bath-house. Imagine all kinds of uproar, fit to make you hate your ears. The hearties are put through their paces, throw their hands about laden with leaden weights, and when they exert themselves, or pretend to, I hear their grunts, their whistling, raucous breathing every time they let out their treasured breath. When some lazy fellow, content with an ordinary oil-massage, intrudes upon my notice, the smack of the masseur's hand on his shoulders,



17 ROMAN BROOCHES. 1: Gilt bronze and green glass. 2: Appliqué bronze with late Celtic decoration. 3: Tinned bronze with green and red enamel and moulded red enamel intaglio. 4: 'Trumpet' brooch with red enamel decoration. 5: Tinned bronze. 6: 'AVCISSA' type (bronze). 7: Tinned bronze. 8: Early 'safety-pin' type. 9: 'Crossbow' type. (Actual size.)

changing its sound according to whether it is laid on flat or cupped, comes to my ears. If the umpire of a ball-game makes an appearance, and starts to count the tosses, I'm done for. The picture is not complete without some quarrelsome fellow, a thief caught red-handed, or the man who loves the sound of his own voice in the bath – not to mention those who jump in with a tremendous splash. Besides those whose voices (if nothing else) are good, think of the high, strident call of the depilator, continually advertising his presence, never silent except when he plucks someone's arm-pits and forces his customer to cry out on his own behalf; or the assorted cries of the pastry-cook, the sausage-seller, the confectioner, and all the hawkers of refreshments selling their wares each in his own distinctive sing-song. ...⁷²

THE AMPHITHEATRE

The Amphitheatre, unfortunately, has not been excavated. It lies near the north-east corner of the Outer Earthwork, and remains much as in Stukeley's day, the arena swampy, the banks overgrown. It is now a poultry farm. The arena is about 150 by 120 feet, and is said to be a couple of feet deep in sand. This may be a natural feature, like the water which fills part of it. The banks are of gravel, about 50 feet wide and still 18 feet high internally; they preserve much of their original elliptical form, the 'most nobl and beautiful concave, but intirely over-grown with thorn-bushes, briars, holly, broom, furze, oak and ash trees, etc.' mentioned by Stukeley.⁷³ The banks have a flat summit, 12 feet wide. The main entrance was at the south end, opposite the Amphitheatre Postern in the Town Wall, and is still very clear. A corresponding break at the north end is mostly due to levelling, but may conceal the ruins of another entrance.

The Amphitheatre appears in a vignette of Taylor's *Map of Hampshire* (1759). The drawing shows walling along one stretch of the outside of the bank, which Stukeley does not mention, but which almost certainly existed, as at Caerleon, to revet the banks and support the timber seating. The ground is scattered with large flints and pieces of brick which may have formed part of this shell. Another feature not recorded by Stukeley is a series of five rows of seats cut in the banks at a distance of 6 feet apart on the inner slope.⁷⁴ All that can be seen today is what Stukeley includes in his

drawing, and the supposed tiers of seats are probably only the result of subsidence and erosion.*

Shows were no doubt given by magistrates at election-time and during their terms of office, and on days of religious or political festival, such as the accession of an emperor. Market-day also offered the chance of a good audience. All sorts of blood sports suitable to the size of the ring will have been offered, bull- and bear-baiting, cock-fights, and the like; boxing, wrestling, and, once in a while, armed combat between members of a touring company of gladiators, schooled to provide the most bloodshed and sword-play with the least serious hurt. Exhibitions of strange animals, acrobatics etc. may also have taken place. If theatrical shows were ever given, they would rarely have risen above the level of farce and pantomime. Nothing better could be expected in a remote province, except in the form of the literary texts which we still have, and even at Rome itself good theatre was almost unknown after Republican times. On the other hand, Welsh love of music, poetry and song may spring from the Celtic spirit of Roman Britain, and recitals and concerts may have occurred. The acoustics of the Amphitheatre are quite good.

It is easy to reflect with horror on the degenerate features of the Roman amphitheatre, every example of which rang to the shrieks of human and animal victims.⁷⁶ Quite how far we should moralize is beyond the scope of this book to enquire. It is fashionable not to do so. But a little circumstance may be given in passing. Some of this book was written late at night at Reading Museum, whilst all-in wrestling matches were going on in the adjoining town hall. The racket of the audience, delighted by a throw, the stamp of their feet (no wonder wooden amphitheatres collapsed from the vibration strains), their cheers, boos and whistles – all clearly heard and felt through the thickness of the party-wall – united to give a most vivid impression of what an amphitheatre audience must have been like, the whole sensation lacking only the stench of blood.

Other Amusements. Two bone dice, one oblong, and both with spotted sides, have been found at Calleva, and a large number of

* The Caerleon Amphitheatre is the only British example completely excavated.⁷⁴ Its arena is 186 by 138 feet, with two principal arched entrances into it and six others giving on to the seats. It held some 2,500 people and was first erected in the late 1st century A.D. Before excavation it presented an appearance similar to the Silchester Amphitheatre, the excavation of which would be very rewarding.

gaming counters of bone and glass. Those of bone are generally lathe-turned and many have numerals or letters scratched upon them. The glass counters are mostly very dark green, 'black', and are sometimes inlaid with coloured spots declaring their value. Several tiles inscribed for use as gaming-boards have also been found. A bone spinning-top opens and almost closes the list of toys which have survived, for most of the small clay or bronze figures turned up are of votive significance and not toys at all.

Many of the counters were probably also used for reckoning. Roman numerals are extremely difficult to calculate with, and if we have to use them we mentally employ the more convenient Arabic system with its 0; the symbols are much more easy to handle. Consequently the Romans transmuted their number-symbols into the physical form of counters, beads or pebbles (*calculi*, whence our word *calculate*) whenever calculations exceeded what could easily be done mentally. Long division or multiplication had to be done by cumulative subtractions or additions; and in sum, the wonders of Roman architecture and engineering seem even more enhanced when viewed against their primitive mathematical background.

THE MANSIO

Squarely within Insula VIII, not far from the South Gate, lies the fourth public building to be described. It was partly explored by Joyce's men, but filled in about 1880. Very little is known about it apart from the plan, luckily very expressive, and details added in 1893.⁷⁷ The building is large, 200 by 210 feet, more than twice the size of the largest private house of Calleva. Adjoining it on the east is a set of baths commodious enough to have been regarded as the public baths of the town before the establishment in Insula XXXIII was uncovered. On the west is a building 60 by 30 feet, a granary, perhaps, or stabling, with stoutly buttressed west wall and several smaller chambers.

The main building is rectangular and consists of three wings arranged about a gravelled courtyard closed on the fourth and east side by a wall. Each wing comprises a row of rooms lined by corridors. The inner corridors overlooked the court, and were probably of half-open construction. The main entrance was in the north wing, and was about 20 feet wide, flanked by pillars on the inside. Opposite, and separated from it by the width of the outer corridor,

was a spacious vestibule communicating with the courtyard. Besides a mere passage, there are ten other chambers in this wing, all about 18 feet square except for four formed by dividing two of the large rooms lengthwise. In the south wing we again find three rooms divided in the same way. It is in fact possible to recognize at least five suites in these two wings, each composed of two large and two small rooms – perhaps private sitting-rooms and bed-chambers.

The west wing houses the main reception rooms, of larger size, three being heated by hypocausts. These are of the 'composite' variety, the necessary cavity being formed, not by excavating the entire area below floor-level, but by sinking a central pit from which channels radiate to the wall-flues. The baulks of subsoil thus left were revetted and bridged by large tiles. Only in the central space was the floor supported on *pilae*. It is clear from the Saalburg experiments that a cavity of reduced area would be quite sufficient for domestic heating: some hypocausts consist in fact of channels only, with no central space at all.

The west wing has been extensively altered, chambers being extended across the original outer corridor at both its south and north ends. It was considered that the north end of the wing was devoted to kitchens, and that a narrow chamber here might have been the site of a staircase leading to an upper storey.

An extension of the outer corridor of the south wing led to the baths, which covered about 3,500 square feet. The northern suite – two apsidal heated rooms and their antechamber – seems to have been built before the remainder, to which it lies at an angle. An unusual feature of the baths is the massive spring-fed reservoir, 6 feet square internally and paved with heavy tiles. The walls are up to 40 inches thick to withstand the pressure. The drainage of the baths has been traced almost completely as far as the Sluice Gate in the Town Wall, and as usual ran through the latrine *en route*.

The Nature of the Building. The size of this establishment shows that it was of public and not private type, and it has been well compared for scale with the temple guest-house at Lydney (Glos.) and with a Gallic site.⁷⁸ The apparent division of the rooms into suites also encourages us to identify it as an inn of some sort, most probably a *mansio* or posting-station for the reception of travellers using the imperial post (*cursus publicus*). This was not a public

service, but maintained for government use by the local authorities.⁷⁹

Whether or not the extensive accommodation described was ever all required at the same time we have no means of telling. The building is larger than the Lydney guest-house, which seems to have been planned for a large seasonal concourse of visitors to the shrine. The comparison however is superficial, for many of those using the *Mansio* would have been accompanied by retinues of staff and servants, especially in the late Empire. Moreover, when we remember that Calleva was the meeting-place of seven roads – whose course near the town is described in Chapter 9 – it becomes evident that an official guest-house of some size was indispensable.

Nothing positive is known of the date of the building. To judge by its alignment with the street-system, it can hardly have been built before the middle of the second century or thereabouts, and may well be much later.

Temples and Religious Life

Few remains of temples of classical type have been found in Britain, and none at Calleva, where the four principal temples are of a Romano-Celtic pattern familiar elsewhere in this country and on the Continent. The plan is simple, consisting of a shrine or *cella* concentrically surrounded by a portico or ambulatory. The buildings may be either quadrangular (Insulae xxx, xxxv) or polygonal (Insula vii).¹ Three or four other temples or shrines have also been identified, two of them almost certainly house-chapels or *lararia*. A separate section of this chapter is devoted to the famous little edifice found in 1892 and described as a Christian church.

THE TEMENOS AND TEMPLES, INSULA XXX

This insula partly underlies the parish churchyard and extends northward below the farm. The complex of buildings which it contains could not therefore be explored as fully as might be wished;² but excavation nevertheless revealed the existence of a three-acre sacred enclosure (*temenos*)³ bounded by a flint wall, replaced at some time, presumably, on the eastern side by a sector of the Town Wall. In this enclosure are two square temples, lying at an angle to the street-plan of the town, and a large hall-like building 40 feet wide and upwards of 70 feet long. A fourth building, with an apsidal west end, was found at the north-west corner of the *temenos*, and others may lie in parts of the area which could not be excavated.

The chosen site was one favoured by the builders of this kind of temple – a hill-top. South and south-west, the land falls away into the declivity where the Public Baths stood; on the east, a gradual slope begins, and on the north the pronounced scarp of the Silchester promontory lies adjacent. The connexion of this sacred area with the vagaries of Street vi-xxxii has already been commented upon (p. 71). When we remember the fate of the 1st-century portico of the Public Baths in Insula xxxiii – a secular building – this phenomenon emerges as striking evidence of the

strength of religious feeling in Roman Britain, which permitted no interference with the bounds of the *temenos*.

The two temples were buildings of some little splendour. The northern temple had three-foot walls of tile-bonded flint-work, preserved to a height of 5 feet or more. The building stood 73 feet square overall; its portico was $13\frac{1}{2}$ feet wide and its *cella* 42 feet square within. Both floor-levels were made up with clay to a height of about $7\frac{1}{2}$ feet above the Roman ground surface, and on this foundation pavements of *opus signinum* were laid – that of the *cella* contained chips of greyish stones to diversify the general red-and-pink coloration. The outside of the building was stuccoed and painted vermilion.

The southern temple was 50 feet square, and had floors of red tesserae. Like its neighbour, it was rendered in red-painted stucco.

Neither of these buildings could have had a domed roof or cupola, because their walls were not stout enough to bear the weight and thrust. On the other hand, domed ceilings of light construction, covered by pyramidal tiled roofs, are quite likely. The porticoes had pentice roofs, resting against the *cella* walls which must have been carried up to a greater height in order to contain the windows necessary for lighting the interior. The porticoes were in this case probably of half-open construction, their outer walls built to about waist-height to support dwarf columns of Bath stone. One such column, found in the churchyard in 1874, presumably came from one of the temples. It can still be seen there, serving as a sundial-base.

The entrances of temples of this type were always on the east, and in the present cases could not be examined because they lay in consecrated ground and under farm-buildings.

Among the wreckage, a number of pieces of Purbeck marble wall-veneer was found, as well as Purbeck and stucco mouldings. A piece of worked Egyptian porphyry discovered in House 3, *Insula xxxii*,⁴ may also have come from one of the temples. Small finds were few. A couple of late coins point to the continued frequentation of the site in the 4th century when, if the street-plan is anything to go by, the temples must have been well over 200 years old. The only discoveries of religious significance were two tiny votive lamps of terra-cotta.

It is curious to observe that the little parish church perpetuates the hallowed nature of this spot, and does in fact lie parallel with

the southern temple. It has been suggested in consequence that it was erected partly on the foundations of a third temple of smaller size:⁵ there is plenty of room for such a structure, and with this possibility we may leave the *temenos*.

SQUARE TEMPLE, INSULA XXXV

Another square temple – again not parallel with the streets – lies in Insula xxxv (Fig. 18, p. 122).⁶ It measures 35 by 36½ feet overall, the *cella* 12 by 14 feet internally. The entrance was on the east, where a foundation for steps exists, and was about 10 feet wide, flanked by columns. The floor was of red tesserae, a couple of feet higher than the ground outside. Only the flint foundation of the *cella* floor remained. At the west end of the *cella*, a three-foot platform was built and here, doubtless, the statues described below were placed. As the walls of the building were under two feet thick, their superstructure must have been of a very light nature.

In and around the *cella* some finds of great interest were made: portions of three inscriptions cut on thin Purbeck Marble slabs, and some scraps of Bath stone statuary.⁷ By the style of their lettering, the inscriptions date from the early 3rd century. The three texts run almost parallel, and record the dedications of statues for which the 'Strangers' Association' of the town had subscribed (p. 76). One of the stones bears the word MARTI[in its top line, and this has been taken to mean that the temple itself was dedicated to Mars, especially as one of the statues was clad in armour. Haverfield pointed out, however, that part of a personal name appeared in the top line of one of the other stones (and perhaps also in the third). This reduces the likelihood that Mars is meant, and doubts are confirmed by the fact that the letters involved are no larger than in other parts of the inscription. The names of gods were usually writ large. A personal name, such as Martialis, is much more probable. The stone is thus brought into line with the others, and like them records the name of the principal donor or the chief guild-officer concerned.

The statuary consists (a) of the shoulder part of a draped statue larger than life-size; (b) of three fragments representing two legs wearing greaves ornamented with lion-masks; and (c) of a left hand, bent at the wrist, holding the butt of a *cornucopiae*. The scale of (b) and (c) is a little under life-size, and the stone is somewhat different from that of (a). Only recently has it been recognized that



18 Imaginative reconstruction of the temple in Insula xxxv.

at least two statues are indicated by these five scraps and, since there are three inscriptions, there may well have been three. It was previously considered that all belonged to a single armour-clad statue embodying a Celtic version of Mars, not as a war-god but with the more peaceful attributes suggested by the horn-of-plenty.⁸ The armour-clad fragments can now be left to represent a war-god in more usual guise. It is not uncommon to find statues of more than one deity in a single temple, the Walbrook *mithraeum* affording a good example of this.

The inscriptions would have been attached to the rubble-built pedestals of the statues to which they referred. These puzzling lumps of stone constitute the only direct evidence we possess as to the gods worshipped in the temples of Calleva, and it has been suggested that the temple at present in question was wrecked by the early Christians, and its idols broken and scattered.

POLYGONAL TEMPLE, INSULA VII

This temple⁹ was found in 1872 by Joyce, acting upon the indications of crop-marks, and was re-examined twenty years later. The building is 65 feet across, and has 16 sides. The *cella* is 16-sided externally but circular within, and is 35½ feet in diameter. Both *cella* and portico walls are 2 feet thick, with ironstone quoins and bonds, not unlike the gates of the Town Wall. It is unlikely that the portico wall was carried above floor-level, except as a curb, since a chip from one of its columns was found, which indicated

that their diameter was about 12 inches and their consequent overall height in the region of 10 feet.¹⁰ The floors were of black and white mosaic,¹¹ but nothing remained in place to show the pattern.

A worn coin of Vespasian (69-79), found embedded in the *cella* wall, suggests that the building was erected in the 2nd century. Three *denarii* of Septimius Severus (193-211) from the *cella* floor may or may not postpone the date of construction to the end of that century or the early 3rd century, according to whether they were sealed by the mosaic or not.¹²

North-west of the temple there is a rectangular building, possibly a store. The temple lies in the south part of Insula vii, amidst a space of about 4 acres almost wholly clear of other buildings. The continuous wall along the north, east and south sides of this area may be taken as a *temenos* boundary like that of Insula xxx, destroyed on the west. A rectangular emplacement, perhaps a way-side shrine, exists in the middle of the east side of this wall. In antiquity, the area would not have been as barren as it appears to be on the plan: we must imagine it planted with trees and lawns.

The only object from the area which can be considered to be of religious significance is part of a globular container of oriental alabaster, which may have contained an offering of sweet oil for the god.¹³

OTHER SHRINES

Three other buildings may be noted. One, almost certainly a temple, lies at the extreme south-east corner of Insula xxi.¹⁴ It stands north and south, and consists of a rectangular chamber 25 feet by 20, with an apsidal recess 10½ feet wide across the northern side. There were two entrances, strangely placed: not, as might be expected, in the south wall opposite the apse and alongside the street, but at the south extremities of both east and west walls. This lateral siting is reminiscent of entrances to such temples as the underground pagan 'basilica' near the Porta Maggiore, Rome,¹⁵ so placed in order to keep the proceedings within more secret than a frontal entrance would allow. The structure under discussion was perhaps the centre of some mystery-cult, and re-excavation might bring to light some of the internal appointments.

The second building is a simple square of 19 feet, of which only the gravel foundation survived, set within an enclosure wall in

Insula xxxvi.¹⁶ This may also have been a temple of some sort, but it is well to be on guard against too ready an interpretation of imperfectly-recorded discoveries.

The third which may be mentioned lies outside the Town Wall, in the north-west corner of the field west of the Amphitheatre. There is at this point a well, in some marshy ground, which some of the early antiquaries thought might be a *nymphaeum* or temple of a water-goddess (perhaps like that of Coventina on Hadrian's Wall). A recent inspection of the site revealed a large moulded coping-stone of Roman date near by, complete with the lewis-hole in its upper surface whereby it was raised. This stone could easily have come from the ornamental surround of a sacred well, and so the suggestion may be correct.

LARARIA

Several buildings in and near houses were identified as private chapels or *lararia* by the excavators. This has not been proved, but in two instances the attribution is sufficiently cogent to find a place here. These cases concern Houses 1 and 2, Insula xrv,¹⁷ and it is no coincidence that these are among the most sumptuous uncovered in the town and undoubtedly residences of the Atrebatist aristocracy, the most Romanized members of the community. In House 1, the structure lay at the north end of an enclosed courtyard, and took the form of an elevated platform 6½ feet square, with a step on its southern side. In House 2, a platform of similar proportions occupied one of the rooms. The walls of this room were plastered and painted in blue, and there was a panel of mosaic in front of the platform. If used for domestic worship after the old Italian pattern, the platforms would have carried superstructures in the form of small classical temples, containing the household gods (*lares*). These generally formed a group of three: a central figure in the guise of a Roman *paterfamilias* engaged upon an act of sacrifice, flanked by two dancing deities holding *cornucopiae* and *paterae* (sacrificial dishes).¹⁸ The identification of the two structures mentioned is accordingly made very much more likely by the discovery of figures of both these types at Calleva. A little bronze from the Forum (4½ inches high, the feet having been broken off) portrays the *paterfamilias* – the *lar* or *genius familiaris*.¹⁹ He is clad in the *toga*, girt in the manner prescribed for solemn occasions, with a fold drawn over the head as a formal exclusion of sounds of ill-omen

during the sacrifice. The left hand holds a rolled napkin (*mappa*),²⁰ and the right must have held a *patera* or some similar object. A point of importance is that the figure is not cast in the round, but, except for the head, is hollow and open at the back, and thus meant to stand in a shrine. There are two nail-holes whereby it was attached. The style of the object is very good (Pl. 17, p. 96); a similar figure, of more indifferent work, has been found at Richborough.

The dancing *lar* was a chance find,²¹ and has been since unfortunately lost in a fire. It stood just over 4 inches high, and was of fine workmanship, quite perfect, with eyes hollowed for silver or paste inlay. Neither of these bronzes can be much later than the 1st century, a significant period for the Romanization of Britain.

RELIGIOUS REMAINS

This is not the place for a survey of Roman-British religion, for which the reader may be referred to an illuminating chapter in a recent book by Professor Ian Richmond.²² In the present context we may limit ourselves to a description of the various objects of religious significance found at our site.

The only known inscription which clearly named a god was that already mentioned in this book, Stair's Forum find of 1744. It contained a dedication to *Hercules Saegon*[, and refers to one of those deities well known in Romano-Celtic lands, a native god equated with the member of the established pantheon who most nearly approached himself, and whose powers duplicated, or sometimes extended, his own.²³

It has been suggested that *Saegon*[- etc. is a version of the name known from Gaulish inscriptions as *Segomo*, to whom horses were sacred.²⁴ All that can be said is that the spelling *Saegomo* would be otherwise unknown, the *e* of *Segomo* presumably being pronounced short. Moreover, where the name appears coupled, it is with Mars and not Hercules. So, as Haverfield suggested, it may in this case merely be an epithet and not a name in its own right.²⁵

The only piece of statuary worth mentioning apart from those already described, such as the *tutela* – about which an elaborate set of rites must have been woven – is an Oölite head found by Colonel Karlake in his garden at Silchester (Pl. 13, p. 81).²⁶ The house was previously a farm, and the head was used as a weight in

a cheese-press, an iron bar being affixed to it for suspension. The bar has now been removed, and the head is on exhibition at the Calvea Museum. It is battered, but of good 2nd-century work, and represents the Egyptian corn-god Serapis. It is rather more than life-size. No traces survive of the *modius* or bushel-measure which must have been carved on the crown of the head, but even without this, the god can be distinguished by the four locks of hair falling over the brow. A splendid marble head of Serapis was found in the Walbrook *mithraeum*.

There are several small bronze figures of unexceptional type portraying Bacchus, Venus, and Mercury, who was a favourite among the Celts. More interesting is a crude but charming bronze statuette, $4\frac{1}{4}$ inches high, showing a girl flute-player.²⁷ She is dressed approximately in Greek fashion, and wears a high crown or *stephane*. She may be regarded as an attendant at some sacred rite (Pl. 16, p. 96).

Statuettes of Venus in pipe-clay – exported in great quantities from the Allier and Rhine valleys – also appear. The Collection contains, too, other statuettes of this material, one of a mother-goddess seated in a basket-chair²⁸ and one of a cockerel, perhaps intended as an offering to Mercury.²⁹

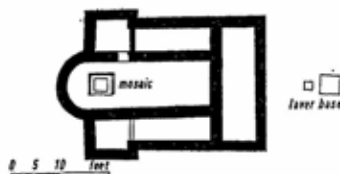
A fair number of engraved semi-precious ring-stones, with trite subjects mostly from Graeco-Roman mythology, may also be mentioned in this connexion. The materials are bloodstone, chalcedony, cornelian, jasper, nicolo, blue paste imitative of nicolo, onyx, plasma, prase, and sard; there are also some of glass. The best, probably, is a figure of a *Genius* cut on an oval plasma (Fig. 16, p. 111) – a cloudy, light-green stone about 0.8 by 0.75 inch – which is quite beautiful when viewed by transmitted light. The *Genius* wears a *modius*-crown and holds a *cornucopiae*; he is engaged in sacrifice, and resembles closely figures of the *Genius Populi Romani* on the coinage of Diocletian (284–304) and his colleagues. There is also a *gryllus* or comic figure composed of two bearded human heads, young and old, conjoined; the beard of one is made into a cock's head. This is cut on jasper. It is unlikely that any of these stones was regarded by its owner as particularly of 'religious' significance, but on the other hand there is also a Gnostic gem, 0.5 inch long, cut on bloodstone,³⁰ which probably did have such a meaning – or was at least used as an amulet. This gem is intended for a swivel ring. On one side are the mystic letters, $\text{IA}\Omega$

and on the other the strange god Abraxas, the letters of whose name (numbers, in Greek) add up to the total of days in the year and the number of spirits believed by the followers of Basilides of Alexandria (*fl. c. 125*) to have emanated from the Supreme Being and to inhabit the 365 heavens. Abraxas has a cock's head, human torso clad in a cuirass, and serpents for legs; he bears a whip, symbolizing the strength of the sun's rays, and a shield. Contrary to what might be supposed from his appearance, he personifies the Good Principle in Gnostic thought. It is not without significance that bloodstone was so often chosen for Gnostic gems: the ancient name for the stone was *heliotropium* and it was credited with powers of 'returning' the sun's rays when placed in water, as Pliny the Elder describes.³¹

Various accessories have been found. They include two uninscribed altars of pedestal form, one unfinished, and some cones of the Stone Pine which were imported as fuel for altar-fires.³² There are pottery incense-cups and votive containers, the latter often of curious shape and very small size, specially made for little offerings of food and drink; bronze and gold leaves and a triangle of bronze chain-mail, from priestly head-dresses; a little bronze bust of Minerva, from a sceptre; and bronze model axes and a spear. The site has yielded about a dozen of the axes, which are about an inch long; one, significantly perhaps, occurred near the East Gate and the *temenos* of Insula xxx.³³ The list may be closed with reference to a clay mould bearing a representation interpreted (not without difficulty) as an imperial marriage, and with a curious chalk taper-holder in the form of a truncated pyramid, $2\frac{1}{2}$ inches high, with a slot at the back. The other sides bear crude reliefs of Mercury, a cockerel, and a serpent. Part of an inscribed, possibly votive, bronze plaque has also been found.³⁴



19 Votive bronze axe. Found at Silchester.



20 'Church' in Insula IV, south-east of the Forum (1892).

CHRISTIANITY

Towards the south-east corner of the Forum insula (IV) lies one of the most discussed buildings of Roman Britain, found in May 1892. It is only 24 by 42 feet overall (Figs. 20 and 21, and Pl. 9, p. 49) and not very well preserved; but within that compass it presents all the features of an early Christian church facing, as often, to west.³⁵ There is a central nave, with apsidal west end, 29½ feet long and about 10 feet wide – the walls are not parallel – and on either side there are small aisles 5 feet wide, which terminate on the west against the walls of slightly wider chambers, vestries perhaps, which resemble rudimentary transepts in plan. The east end of the building is occupied by a wide and deep porch, a *narthex*, such as is found in many early churches of Mediterranean lands. Some feet east of this, a four-foot tile foundation was discovered, with flint pitching around it, and a sump near by. This structure lies on the axis of the building, and so does a well 20 feet west of the apse; both may be connected with the building, the foundation especially.

The floor, not greatly raised above the surrounding ground level, was found to retain stretches of red tessellation in the *narthex*, nave and, at the same level, in the apse. Here there was a five-foot-square panel of coarse mosaic (Pl. 9) containing a bold chequer pattern of black and white, surrounded by seven lozenges on each side, alternately of red and grey-green Purbeck cubes. Fragments of painted wall-plaster were also found, some speckled in imitation of marble. There was nothing to indicate paintings of the sort which decorated a room in the Roman villa at Lullingstone, Kent, where richly-clad praying figures and two Chi-Rho monograms have been pieced together from the hundreds of scraps of plaster found.

The excavations did not produce any evidence of date. The mosaic is however of a pattern known also e.g. at Verulamium, where it has been assigned to about the year 300.³⁶ This would be well in accordance with a date of construction after the Edict of Toleration for the Christians was issued in 313.

In the case of churches which faced west, the priest stood behind the altar and faced east. Granted (for the moment) that the Silchester building *was* a church, the altar must have stood on the mosaic panel, and was probably of wood originally; traces of mortar were found on the surface of the mosaic and it was suggested that the altar was later replaced in masonry. The condition of the cubes around the panel however introduces a perplexing problem. They are worn only in front, i.e. on the east, and are elsewhere sharp and unworn. It would seem either that the rear of the apse was covered by matting, or that the celebrant did not, in this case, face east, or (perhaps the most probable suggestion) that the entire floor west of the outer edge of the mosaic panel was raised at some period shortly after the building was completed, before the cubes had become worn. This would also explain the mortar on the surface of the pavement.³⁷ Another curious feature is the absence of the built-in bench around the wall of the apse, generally provided for the attendant clergy. There is very little room for it, indeed for the priest himself; and it may be that there was only one priest at Calleva – a suggestion which the tiny size of the building supports.³⁸

At times of divine worship, the nave would have been filled by a choir, and the congregation would have clustered behind and in



21 Imaginative reconstruction of the 'church', Insula iv.

the aisles. The deep porch was reserved for those not fully in communion – the catechumens. The tile base east of the porch probably supported a basin (*labrum*) of water where worshippers might wash their hands and faces before entering church.

So far, so good; but the identification of the building rests solely on its plan, which could stand by itself more convincingly in 1892 than today. No trace whatever to clinch Christian use was forthcoming, despite the most careful excavation. A word of caution urged by Professor Jocelyn Toynbee may therefore be repeated here.³⁹ The Walbrook *mithraeum*, and more especially two pagan mystery shrines in Rome, show that the plan involved was not confined to churches. It is derived, plainly, from that of civil *basilicae* – compare the Silchester example near by – usefully adapted to a particularly esoteric form of religious expression. The worship of Dionysus, Isis, Mithras and the rest involved rites in which only initiates could participate, demanding therefore a closed building which could effectually seal the ceremonies from profane gaze. Hence the suitability of the closed basilican plan, the direct opposite of the plan of a classical temple, with its open porticoes, and for that matter of the Romano-Celtic temples described above. Early Christianity was as esoteric as the pagan cults in its rites of initiation, to which especial point was given by the caution necessary after so many brutal persecutions. Hence it adopted the same kind of building,⁴⁰ and the influence of the plan of the Roman civil basilica is displayed by subsequent Christian architecture down to our own day.

The little edifice in Insula iv has not therefore been formally identified as a church. But from Bede we gather that churches were quite common in Britain,⁴¹ and it is more than probable that this is one of their number.

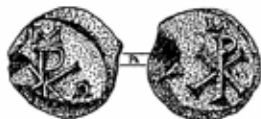
The Christian objects found at Calleva are few and easily described. Most important is a leaden sealing found by Joyce in the Basilica.⁴² It is impressed on both sides with the Chi-Rho monogram flanked by Alpha and Omega. The letter M appears on one side above the Chi-Rho, and XX in the same place on the other. It is an official – possibly an ecclesiastical – sealing of some sort, of 4th-century date, from a package of goods or documents. The second object is a gold thumb- or finger-ring weighing 185½ grains, which was found in ploughing in 1786. The hoop is nonagonal, with a tenth and larger facet serving as the bezel. This bears a rude

head in profile and the inscription VFNVS, *Venus*. Around the hoop, however, in the curious, spiky lettering which is not seldom found on articles of this type in the 4th century, is the Christian inscription | SE | NI | CI | A | NE | VI | VA | SII | NDE |, *Seniciane, vivas in De(o)*. The duplication of the I of IN has left no room for the final O. This inscription was certainly added to the ring after the Venus-inscription, for the ring was considerably worn before it was engraved.

The ring may be connected with the following circumstance. At the Lydney temple already mentioned, a curse was found, badly scratched in worse Latin on a piece of sheet-lead. In translation it reads: *To the God Nodens. Silvianus has lost a ring, the half-value of which he promises to Nodens. Let the God not grant health amongst those of the name of Senicianus until he brings it right back to the Temple of Nodens.* Senicianus is such a rare name in Britain that it is quite probable that this is the very ring involved, and the secondary nature of the Christian inscription supports the suggestion. Both ring and curse are of late 4th-century date.⁴³

Inscriptions with VIVAS, *Mayest thou live*, are of a definite though not exclusively Christian type. Two late-Roman ring-bezels of silver from Calleva may be mentioned. Each has a crude profile head like that of the Senicianus ring. One is inscribed IVL BELLATOR VIVAS, *Mayest thou live [in the Lord] Julius Bellator*, and the other merely VIVAS, being presumably a commercial and not a bespoke product.

The only other objects are a fragment of Rhenish engraved glass beaker, bearing a fish and a palm-branch; and a pottery lamp bearing a cross and a representation of Daniel in the Lions' Den. This last is of modern importing: it is of a sort popular in the Mediterranean regions in latest Roman times, and formerly bore the characteristic limy incrustation of objects from that area.⁴⁴



22 Leaden sealing with Chi-Rho monogram and Alpha and Omega, from the Basilica.

CEMETERIES AND BURIALS

This chapter may be closed with reference to the methods of burial adopted at Calleva. In Belgic times, the rite (as mentioned in Chapter 2) was cremation, and the site has produced an ovoid beaker, probably a native imitation of a butt-beaker, containing cremated bone. It is uncertain where on the site it was found.

One or two human burials, and a fair number of odd scraps of human bone, have been found within the area of the later Roman town, but the regular method of disposal of the dead was in cemeteries outside the walls. The main cemetery lay outside the North Gate, on the flat ground between this and the Outer Earthwork. It has not been excavated. An inhumation in a stone sarcophagus, accompanied by a small pottery bottle of 2nd-century date, was found in 1852 at the top of the slope, just to the east of the line of the Roman road from the North Gate. The bottle is of cream-coloured ware, and has a decoration of raised lozenges of orange spots.

Another cemetery made use of the bank of the Outer Earthwork in the Rampier Copse sector, and was explored by Colonel Karslake. The burials were all by cremation, and must belong to the latest period when this method was still favoured, the middle or later 2nd century. It is probable, as Karslake suggested, that this burial ground was used by the poorer inhabitants of Calleva.⁴⁵

Most of the burials were disturbed by badgers and rabbits, but a fairly typical example found in 1900 revealed the burial-practice adopted. The bank was cut back until a vertical face, $4\frac{1}{2}$ feet high, was left. The pyre was built against this, and the corpse laid on top, resting on a bier held together by large iron nails. It wore its sandals, and so was presumably fully clothed. An ox-jaw, and possibly also drink in a pottery container, were placed with it. When combustion was completed, the ashes of the dead were gathered up and put into a grey pottery jar (in the Calleva Museum), which was placed in the position occupied by the head of the corpse. The gravel was then shovelled back into place, and all that remained to mark the spot was a small pile of flints and a piece of glass bottle which had perhaps contained a final libation.

The pottery jar lay nearly $3\frac{1}{2}$ feet below the flints and, from its distorted shape, was clearly a 'second' or waster cheaply bought from some local pottery. The archaeological evidence for the

method of burial described above consisted of a burnt area, about $6\frac{1}{2}$ feet by $4\frac{1}{2}$, extending south of the urn and containing the large nails mentioned, as well as burnt ox teeth, etc., and fragments of a pot. The sandal nails lay at the far end of this area.

The burials were mostly on the inner slope of the bank, but in 1909 a somewhat similar cremation was found on the outer face, taking advantage (presumably) of a spot where the flint retaining-wall (p. 72) had collapsed. Fused bronze scraps were found in this case, probably the remains of brooches or other articles of adornment worn by the deceased.

Houses

The old excavations revealed about 180 buildings which were either houses or, a few of them, shops. The foundations of about 80 of these buildings are complete enough to be recognizable at a glance (see folding plan at the end), but it will be seen that the Callevan houses were laid out in a different fashion from those which most of us live in today. Instead of an entrance-hall containing doors to all the ground-floor rooms and a staircase to an upper storey, these Roman houses present essentially a row of rooms connected by a corridor, or sometimes by two, back and front; and it is extremely doubtful whether many of them had upper floors. Two, three, or (on one occasion) four such blocks of rooms might be placed together to form wings around the sides of a courtyard or formal garden. The corridors were often of half-open construction, a low outer wall supporting dwarf columns to the eaves of a pentice roof.

The true total must be very much higher than 180. It can only be guessed, but perhaps 300 is not an excessive figure. Allowance must be made for huts and houses built entirely of wood, for very few of this kind were identified and, especially in the early period, they must have been numerous. Moreover, the early Roman town extended beyond the confines of the Wall; and, though the area between this and the Outer Earthwork is virtually unexplored, it is known to contain buildings.¹ Ribbon-development along some of the roads leading out of the town must also be considered: in 1956 the excavations of the Silchester Excavation Committee revealed Roman occupation nearly a quarter of a mile from the West Gate.

Every structure found in the old excavations is marked on the 1908 plan, but without chronological distinction within the Roman period. As already stated, none was dated by formal archaeological means, and we are obliged therefore to rely largely upon surmise and inference for such dates as can now be tenta-

tively ascribed to some of them. These are no substitutes for proof, and, though useful, prohibit all but the most general treatment of the dwellings of Calleva. The dozen or so shops are considered in Chapter 8.

THE EARLY HOUSES

Two of the four trenches cut through the backing-mound of the north wall in 1938 brought to light traces of wooden huts or houses, which are as yet the only formally dated buildings of Calleva and constitute the exception to what has been remarked above.³ Only the holes for their timber uprights, their clay floors and associated rubbish remained and, owing to the superincumbent mass of the mound, their complete plans could not be exposed. Two of the huts were of very rude construction, perhaps circular; and, since no roofing material was found, we may conclude that they were thatched, perhaps with reeds gathered in the marshy hollow where the Public Baths stood. The huts are dated to 45-65 and 65-100 respectively, and both were rebuilt in the early 2nd century - one to a similar kind of plan. The other, on 1938 Site C, produced evidence of a more elaborate structure with a tiled roof, and therefore it was, most probably, rectangular.

A find of some interest was made in the debris, namely part of a terra-cotta antefix³ or roof-ornament (p. 148 and cf. Fig. 28) bearing the face of a horned guardian deity. Fragments of antefixes from the same mould have been found in other parts of Calleva,⁴ for example at the north-west corner of Insula IV, and suggest the existence of houses of similar type and date elsewhere in the town.

North of the Roman church in the same insula, another early house can be identified.⁵ Its remains consist of emplacements dug into the gravel for the reception of horizontal sleeper-beams slotted to take the upright members of the frame of the house. Its axis does not coincide with the alignments of the Forum or of the streets. It was about 55 feet long, with a separate extension at the east end, and at least one partition. Parallel with the main emplacement, and about two feet to the south of it, is a row of a dozen large, flint-packed post-holes, $4\frac{1}{2}$ feet apart, which seems to belong to a building of different and probably earlier date. The house has obviously not been completely explored, but both it and the antefix fragment from the opposite corner of this insula may be taken

as evidence of early buildings cleared away when the Forum-Basilica was laid out towards the end of the 1st century.

OTHER EARLY TIMBER HOUSES

It will be remembered from Chapter 3 (p. 67) that the regular street-plan of Calleva was ascribed to the reign of Hadrian (117-138), and about 90 buildings, or half the known total, lie at various angles to it and are *ex hypothesi* earlier, for it clearly became fashionable to build in conformity with the grid. In actual practice it is safer to confine attention to those which have been either truncated or otherwise affected by the passage of the streets, and are therefore unquestionably of earlier date.⁶ Apart from those already considered, they are the oldest known houses of Calleva; and four of them are particularly interesting because of the details of timber construction, general at this period, which they preserve.

xxxiv, 1⁷ is a large house of several dates, but the parts now in question are the south wing and its appurtenances. One of the main east-west walls incorporated five large oak stumps, 16 to 22 inches across, with squared bases set in flint-packed post-holes, placed 11 feet apart from centre to centre. The east wall of the yard to the south at one time contained two other stumps, 6½ feet apart, but entirely rotted away. These stumps are clearly the remains, too large for removal, of a timber-framed house over 45 feet in length from east to west.

A later *opus signinum* floor in the same wing proved to be founded on a thick layer of clay daub fallen from the interstices of the frame of this early wooden house. Embedded in it were several dressed and jointed beams – an uncommon discovery, and it is much to be regretted that they do not survive. One is especially worth describing. Like the others, it was of oak, 5½ by 4½ inches in section; and, except for tenons lost at either end, was complete and 54 inches long. The sides both contained four chase-mortises where lesser timbers were seated at an angle of 17° – a method used then, as now, when the main timbers are already in place and it is desired to affix others. The angle and number of the subsidiary members in question suggest that they may have been intended as decorative additions.

So far we have considered frame-houses with uprights set directly into the ground or into sleeper-beams which were them-

selves in contact with it. The second method is an improvement on the first, and the remaining three examples illustrate another type in which use is made of flint sleeper-walls, two or three feet high, which raised the entire wooden frame clear of the ground and thus considerably lessened the risk of rot, otherwise great, particularly with green timber.

In one example, xxxii, 1,⁸ an end wall remained to its full height and in consequence preserved the central chase in which a sleeper-beam was laid; but in most cases the walls were not so well preserved and the best guide to the vanished superstructure is their width. If only 12 to 18 inches wide, it is unlikely that they supported anything but a wooden frame. A good example is xxxiii, 4.⁹ In its original form, this house must be of a date long anterior to the street-plan: it is well set back from the nearest street, at an angle of about 11°, and moreover, it was superseded by House 5, which was itself clearly built before the adjacent street and had to be brought into conformity with it by the construction of additional chambers on the north-west. In House 4, the primary plan consists of a rectangular main block 61 by 17½ feet, surrounded by a verandah 7 or 8 feet wide. The doorway was in the middle of the west side. If partitions existed, no traces were found, and indeed the structure was ruined below floor-level. The walls were little more than a foot thick, but well built with tile and brick quoins. House 5 was very similar, but built at right-angles to the other; it too had the unusual feature of a verandah on all four sides, and two partitions were found. One room had a red tessellated floor and the other was paved with tiles.

Parts of xxvii, 1¹⁰ were of the same construction. The east wing was at first a separate house, with a main block and a corridor on the west. In one of its rooms some fragments of clay daub were found, fortuitously baked in a fire which consumed the house at some period, and thus retaining their original form. On the back, impressions of the wattle twigs to which the daub was applied can still be seen, and on the front there is an embossed chevron pattern which served as a key for a waterproofing outer coat of stucco. Similar fragments have been found in a late 1st-century context at Verulamium.¹¹

Elsewhere daub survived only in the form of layers of stiff yellow clay (as discovered in xxxiv, 1) overlying the floors. It was observed that the layers were generally thicker in the main blocks

than in the corridors – 18 inches as opposed to 6 inches – and the greater height and solidity of those parts of the buildings are thus attested. Such layers were sometimes found in houses belonging to the New Town Plan: timbered or half-timbered building was not confined to the early period.¹²

On analogy with other sites, such as Verulamium, the earliest date at which this third method of building was introduced is unlikely to be much before the last years of the 1st century.¹³ Before the days of the New Town Plan, walls carried up to their full height in flintwork must have been very rare, and possibly even confined to parts which for obvious reasons needed a more solid or more fire-proof fabric. Some buildings of apparently unusual plan, such as xxxii, B3 (isolated apse) or ix, B1 (isolated wings and corridor) may be cases in point, as also supposedly isolated hypocausts like xii, B. Apse and hypocaust are in fact combined in xvii, B2 and xxxii, B3. Careful re-excavation would no doubt bring to light the full plans of some of these houses, and would show that the remaining parts were entirely of wood. This is not to say that the flint-built parts were of the same date as the remainder.

From what has just been said it will be seen that although the houses of the Old Town are characterized by the presence of a main block of rooms flanked by one or two corridors, some examples (e.g. xviii, 3 and xxxii, 3) also possessed projecting wings where the reception-rooms lay. In very early days, however, wings are not to be expected.

Very early specimens of the rectangular wooden house, as far as British discoveries are concerned, are at Canterbury (*Durovernum Cantiacorum*) and Camulodunum,¹⁴ belonging to the years 25–70 and 49–61 respectively. Lady Fox has suggested that the origins of this kind of house are probably Belgic rather than otherwise, for it is found very commonly in areas settled or influenced by that people.¹⁵

THE LATER HOUSES OF CALLEVA¹⁶

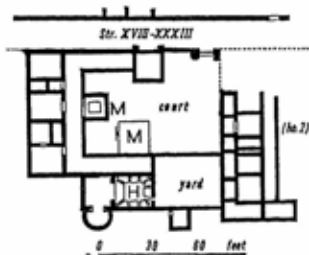
The plan supplies instances of buildings of the same type (iii, 1 or vi, 2) squarely aligned with the streets and *ex hypothesi* coeval with them. A few may be of Old Town date, but C. A. F. Berry has shown that the type is by no means confined to the early Roman-British period, and of 27 Silchester houses which he examined, 14

belonged to the Old Town and 13 to the New, with wings and double corridors fairly evenly distributed between the two groups.¹⁷

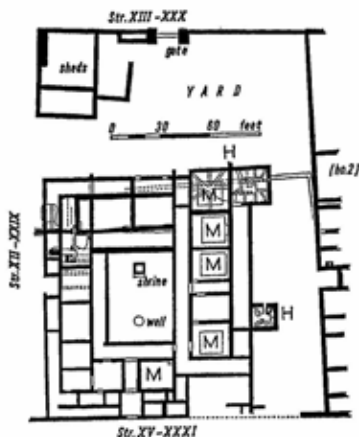
Calleva contains about 16 very large houses of developed form with two, three or, on one occasion, four wings 90 feet or more in length. They were the residences of the tribal magnates. Most are fitted tidily into corner-sites or built squarely along one side of an insula, and have southern or eastern aspects. A few, however, are set back from the streets at an angle, and are adapted to the new alignment by the building of an entrance corridor (xxiv, 2) or porch (xxiii, 2 [Fig. 23, below] or xxvi, 3). Such houses should be of Old Town age, however much enlarged, and their conformity with the streets need not be earlier than about 200.¹⁸ Others,



23 Plan of House 2, Insula xxiii (1900).



24 Plan of House 1, Insula viii (1895).



25 Plan of House 1, Insula xiv (1895).

although more or less on the street-alignment, unquestionably developed from a single block, and the four-winged 'courtyard' house xiv, 1 (Fig. 25, above) is a case in point. Its neighbour, xiv, 2, is a similar mixture of various dates, the two principal blocks being connected by a corridor sumptuously paved in mosaic. Others again were built to the developed plan and never altered very much: examples are viii, 1 (Fig. 24, p. 139), and the later form of xxvii, 1 adjacent to an earlier building mentioned above. Both this and viii, 1 consist of an L-shaped block of living-rooms placed end-on to the street, and gained only after a vestibule and a length of corridor have been traversed. The best rooms lie at the extremity of the 'L' and were thus well secluded from domestic bustle and from street-noise. Similar seclusion of the reception-rooms is noticeable elsewhere; but sometimes, when an old building was refurbished, they were sited according to established use or to structural necessity. Thus in xiv, 2 or xviii, 2 they flank the streets.

It is probable that most of the houses with which we are now concerned date from the 2nd century, the golden age of town-life.

Proof is slight, and this statement is made by reference to Verulamium and other towns which have been excavated more recently than Calleva, and by a more expert technique. From the evidence of our own site, however, XXIII, 2 seems to have been complete, except for its porch, by about the year 200, and the same may be true of XXIV, 1 and 2.

That all or most of the houses were still the homes of thriving families in the 3rd and 4th centuries there is no reason to doubt; and one at least may have been built about 300 or later. This is XIX, 2, which overlies remains of other buildings including a fine mosaic of late 2nd- or even 3rd-century date (p. 153; Pl. 11, p. 80), possibly, indeed, later still. The succession of structures on this site must point to a late date for the final version, and it is not without significance that XIX, 2 is the only one to have had its own bath-suite. The house is L-shaped, with a main block parallel to the street on the east, but separated from it by a courtyard or formal garden. The baths lie at the south of this wing, and the courtyard is closed on the south by a walled yard.¹⁹

STRUCTURAL DETAILS

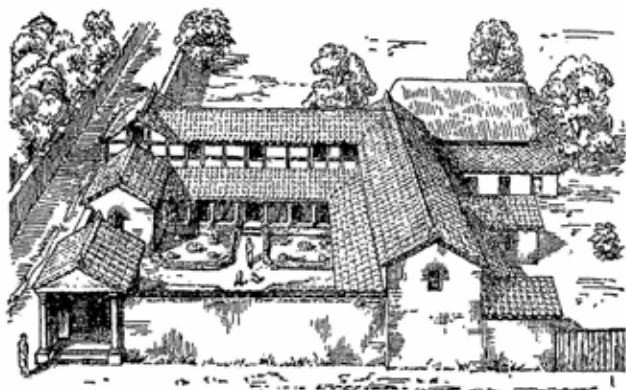
Walls. Enough has been said about timber buildings to make further remarks on this subject needless. Walls carried up in flint were about two feet wide, occasionally a little more, but three-foot or wider walls are found only in demonstrably special cases, such as at the towers of the West Gate, in the Forum-Basilica, or in the vaulted room of XXXIV, 1 (p. 148). The walls had quoins normally of brick or tile, sometimes of dressed stone, especially ironstone, and bonding-courses of tiles also occur. Little is known about the foundations, for the reason that the old excavations rarely penetrated to their level. They were wider than their superstructure, and made of flints, occasionally of gravel. Where the ground was weak or previously disturbed, walls were buttressed, contained relieving arches (XXVII, B1), or were built on piles. The walls were stuccoed and painted, white or pink outside, and with frescoes inside.

Upper Storeys. Reference to the general plan and the house-plans (Figs. 23 to 25, pp. 139-140) will show that although the smaller houses (many of them of Old Town age) had only half a dozen rooms or even fewer, the larger houses very often possessed a dozen or more, some of them 18 or 20 feet long. The number of

rooms has a very obvious bearing on the size of the households, and thus provides as good a yardstick as any for gauging the permanent population of the town. But we deal only with ground-plans: no house is preserved to a greater height than a few feet, and before any conclusion, however tentative, is reached the vexed question of upper storeys must be considered.

In some houses (to choose a small and early example, XVIII, 3) certain narrow rooms, which do not seem to be passages, appear; and these, it has been suggested, contained stair-cases.²⁰ Rubble-built *steps* are common enough, but a mass of masonry appropriate to a *stair* has never been discovered in such rooms; nor have the requisite emplacements for wooden stairs been satisfactorily identified. VIII, 1 contains the most likely example at Silchester.²¹ The existence of upper storeys is therefore strictly not proven, and a desire to add them to our mental picture of the Calleva houses may be more than a little governed by modern practice based upon mediaeval tradition and the cost of building-plots in our own towns. Calleva was an open town, and land could not have been expensive; it is more than probable that the necessary accommodation was generally obtained not by building upwards but by increasing the ground-floor area. These remarks do not refer to basement or cellar rooms, which in any case have not been found at Calleva. The economic conclusions which can be drawn will be found in Chapter 9.

Doorways and Doors. Few doorways have survived complete from the wreck of Roman Britain, but the stumps of walling which are all that generally remain of our Roman-British buildings are as often as not high enough to mark their positions. Sometimes the threshold sills and parts of the jambs are preserved. In the west and north, where there is good stone, these were very often of massive slabs; but at Calleva, where every single piece of good building-stone was imported, monolithic sills and jambs are naturally very rare. Even at the Gates wood was used for this purpose. House-door thresholds were made of wood or mortar, the latter sometimes tiled, paved with bricks, or tessellated (e.g. XXXIII, 4, 5, B 6).²² The presence of wooden sills was demonstrated by imprints on the mortar foundations. In XXVII, 1 these marks showed that the sills were $4\frac{1}{2}$ feet long, 18 inches wide (the full width of the walls) and 3 inches thick.²³



26 Imaginative reconstruction of House 1, Insula xxiii.

Stone sills were found in xv, 83 and in an outer doorway of xix, 2; but the best example is in xxxiv, 1 and gave access to a room of singularly massive build with a vaulted ceiling. It was 6 feet long, 37 inches wide, and contained a countersunk area 3 feet by 27½ inches for the doorway proper. There was a raised edge on the outer side of the sill, which acted as a door-stop; and the jambs, which were also perhaps of stone, were seated on either side of the hollowed portion. The remainder of the stone was embedded in the wall on either side.²⁴

Setting aside street-entrances, which might be 9 or 10 feet wide, and thus better described as gateways (e.g. viii, 1), internal doorways were between 3 and 6 feet wide, and some of the best examples were found in xrv, 1 and 2. The wider doorways were no doubt closed by double doors.

Doors were generally mounted on pivots in the case of stone or wooden thresholds, and iron pivot-shoes similar in all but size to those found at the West and South-West Gates are known. The stone sill in xxxiv, 1 exhibited a pivot-hole, and a channel which communicated with it made it easy for the door to be removed when rehanging became necessary. That the pivots were sometimes in a bad condition is shown by shallow, concentric grooves

near the pivot-hole, caused by the door grating on the surface of the stone. Doors set above tiled or tessellated thresholds were probably hinged, owing to the difficulty of pivoting them properly in such surfaces. Portions of strap-hinges have been found.

We know very little of the construction of the doors, except that they were generally of oak and fairly massive, and sometimes studded with iron nails and bronze ornaments. We do however know a great deal about the locks which were fitted to them. Keys are among the commonest of finds, and over 150 have been found at Silchester. They represent lock-types ranging from a simple pattern of latch through tumbler-locks to lever-locks with wards like those in use today. Padlocks are also known (*cf.* Fig. 27, p. 147).

The developed type of tumbler-lock is particularly interesting. As Pitt-Rivers put it, a tumbler is the 'bolt of a bolt'²⁵ and it is worth remarking that after some centuries spent in the wilderness of ward-lever locks, locksmiths have returned to a modified form of tumbler-lock because of the greater security offered by the infinite variety of the number, spacing and shape of the pins. The Yale lock, for example, employs tumblers, but Roman locks were not of such precise form. They were, as far as we know, cased and not mortised into doors. They consist of an iron or cast bronze bolt containing a pattern of vertical perforations, usually square or triangular, in which tumbler-pins were held by a spring. The key has a bitt at right-angles to the shank, bearing vertical pins which correspond to the piercings of the bolt. When pressed vertically into position, it raises the tumbler-pins and takes their place. The bolt can now be withdrawn by moving the key sideways in the L-shaped keyhole. A modern model of such a lock can be seen at the British Museum.

The keys were often quite ornate, made of bronze or iron, or with bronze heads and iron bitts, for wrought iron is a far less brittle metal than cast bronze, and not so likely to break in use. A few keys for tumbler-locks exhibit an extra safeguard in the presence of perforations designed to pass obstructions in the lock, i.e., wards. Keys for lever-locks are generally of a fairly simple type, and may be compared with those fitted to modern suit-cases or cupboards. Many were made in the form of finger-rings.

The padlocks worked on the spring principle. The bolt bears springy iron barbs which are compressed as it is pushed home into the lock-case, and expand inside to prevent withdrawal. The key

takes the form of a shank with an iron collar at right angles, designed to run up the bolt and perform the recompression necessary before the latter can be withdrawn from the case. The largest padlock in the Collection is 21 inches long; it was included with a great hoard of iron-work, scrap and tools, found in 1900 (p. 186).²⁶ It is of 4th-century date. The smallest, also probably late Roman, is a flimsy bronze padlock with a hinged hasp fastened by a small bolt inside the square case. It is $1\frac{1}{2}$ inches high. There is also a pair of iron handcuffs, of rare type, secured by a trident barbed bolt.

Windows. If doorways are rare, window-embrasures are even rarer, for in no case are the walls of living-rooms preserved to sill-height. It is probable that windows were set higher than is customary nowadays: flanking corridors in fact made clerestory lighting desirable in all but wing-rooms. From the remains of some cellar and other window embrasures which have survived, it seems that splayed sides, sloping sills, and square or rounded heads were normal. The apertures may have been small by modern standards; but the Swiss window-frame mentioned above (p. 97) shows that this was not invariably so. It fitted a window about 40 by 44 inches and, what is more, the window of a wing-room. It may hence be inferred that living-room windows, where it was possible to site them fairly low, differed as much from those of cellars etc. as their modern counterparts do. In any case, the brilliant wall-frescoes and mosaics demanded a flood of light, and if windows were mostly small, they must also have been correspondingly numerous.

In our climate – in Roman times as now – windows were often glazed. The panes were very different from ours, being of a greenish tint and at best but semi-transparent. The light filtering through must have subdued the colours of the interior decoration very considerably, but it is difficult to imagine that allowance was made for such an effect. There are two sorts of window-glass, thick and thin, early and late respectively. The first variety was cast up to a quarter of an inch in thickness in an open stone mould, and is therefore rough on one side. No panes survive entire – this would be too much to ask – but a stone mould found at Warrington²⁷ suggests that 12 by 8 inches is a likely size. The thin glass appears to have been rolled and not moulded: it is bright on both sides, and contains elongated bubbles which could scarcely result otherwise. One or two pieces found at Silchester show signs of having

been trimmed: it is possible to trim glass with shears under water, and this may have been the method adopted.

Glass adhering to the sides of pots used as crucibles, droplets, and partly-fused scraps suggest that rough sorts of glass such as window-panes were made at Calleva – less perhaps from primary constituents²⁸ than from scrap or 'cullet'.

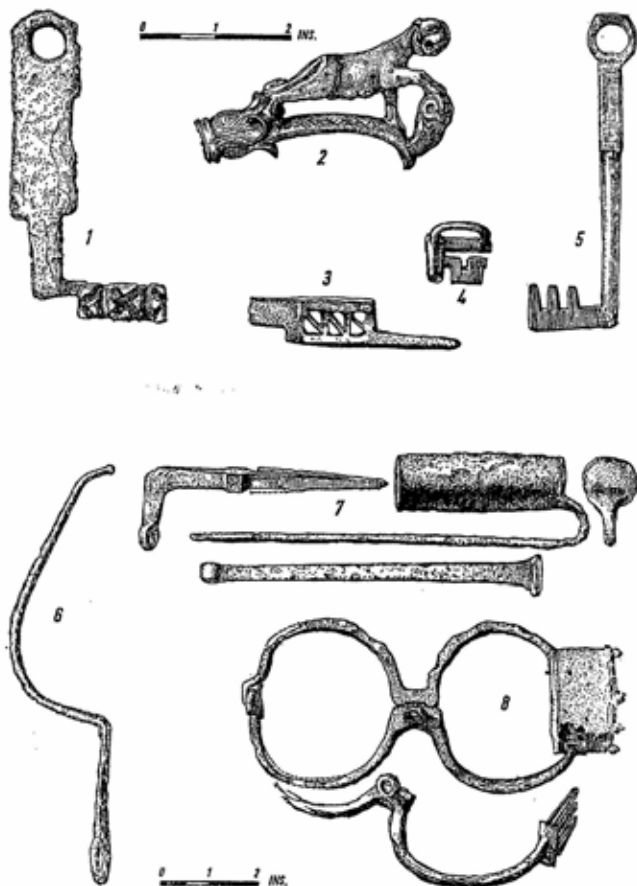
Roofs. Tiled roofs were by far the commonest at Calleva. Remains of tileries, Roman and later, are evident in the rubbish scattered over many fields in the region and testify to the suitable quality of local clays.

The tiles were of two sorts, used in conjunction: rectangular *tegulae* about 16 by 12 inches and an inch thick, with flanged sides; and half-round *imbrex* tiles which covered the joints between the rows of *tegulae*. Both kinds of tile taper slightly to fit over those next below by means of rebates. A form of tile on the market today is called a 'double Roman' from its shape, which, though moulded as one, consists as it were of two *tegulae* separated by an *imbrex* in the middle and with *imbrices* on either side. The Roman tiles are excellently baked, and they were not nailed in place, but remained by dead-weight alone. Consequently the roofs were of low pitch, not exceeding about 30°, and required a very stout framework of rafters.

To pass by roofs of organic materials such as thatch, turf or shingles, which have left no trace – indeed it is by the absence of any remains of roofing-material that their existence can be deduced in specific cases – roofs of stone slabs are the only other sort in evidence, though rare on account of their cost. The slabs had to be brought from the west country or possibly from north Oxfordshire, and transport by land was expensive. The stones were trimmed – generally on the site – to a hexagonal shape and were nailed in place so as to overlap like fish-scales.

The ridge of the roof, and hips if they existed, would have been covered by *imbrex* tiles or, rarely, by Bath stone ridge-blocks; the valleys were roofed by inverted *imbrices* or by lead sheeting. One piece of lead found bears the impression of the cubes of the mosaic floor upon which it had fallen as a molten mass; it may have come from some such position.

It was customary to finish the gable-ends by some kind of ornament, termed a finial. These were generally of stone, and several



27 LOCKS AND KEYS. 1: Iron tumbler-lock key. 2: Bronze key-handle in the form of a panther resting a paw on a ram's head. 3: Bronze bolt from a tumbler-lock. 4: Bronze ring-key (for lever-lock). 5: Bronze tumbler-key of simple pattern. 6: Iron latch-lifter. 7: Barbed iron bolt, cylindrical lock-case, and key, from padlocks (do not belong). 8: Iron handcuffs. Note reduced scale of 6-8.



28 Antefix. (One-quarter actual size.)

have been found at Calleva. But it is also probable that the clay antefixes already mentioned were used for this purpose, for except on military sites they are rarely found in quantities great enough to suggest that they were placed along the eaves, as in classical lands, to close the open ends of the *imbrices*.

Ceilings. All rooms of any pretension must have had plastered ceilings. It is inconceivable that frescoed walls led up to a view of roof-beams and the undersides of tiles; although beams and a planked roof, as can be seen in almost every modern church, are not out of the question. Ceiling-plaster however became only too easily confused with that fallen from the walls, and was never satisfactorily identified at Silchester except in one room of VIII, 1.²⁹ In XXXIV, 1 a barrel-vault existed,³⁰ and more can be said about this. The room concerned – its monolithic threshold sill has already been described – is about 14 by 11½ feet, with walls 2½ and 3 feet thick. The vault was formed of box voussoir tiles arranged in

vertical bands, each tile resting directly on the next; the bands were united by thick mortar joints between and on top and bottom. The lower or ceiling side was faced with plaster and painted white. A vault of similar construction existed in the Roman Baths at Bath, and fragments of it can still be seen there.

Commenting on the unusual strength of this room, Fox suggested that it was a strong-room for the safe-keeping of documents or treasure. There were no safe-deposits, bank-vaults, or anything of that description at Calleva, and so the individual was thrown back upon private arrangements for the safety of his valuables. In *xxiii*, 1 Joyce found the remains of a strong-box set into the mosaic floor of one of the principal rooms, within a wooden frame. The emplacement measured 6 by $3\frac{1}{2}$ by 2 feet, and was roughly walled at the sides.³¹ Three strap-hinges, a drop-handle, lock-plate and four-pronged tumbler key, all of iron, lay within. The lid of the chest was of $1\frac{1}{2}$ -inch oak, as was evident from the clenching of the nails which still stood in the hinges and from fragments of wood rusted into the ironwork. A mat was probably kept in place over the box, to disguise its presence, but so obvious a place of concealment did not prove to contain any of the valuables once kept there!

The best and most usual way of securing the safety of money and other valuables was concealment in a place not likely to be discovered. By sheer accident, hoards of coins have been found in the most improbable places: at Silchester, over 258 *denarii*, buried about the year 200, were found in a pot embedded in the side of a refuse-pit in *Insula xi*.³²

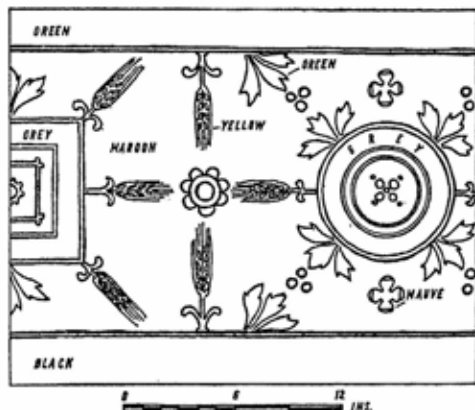
Wall Decoration. 'Colour,' wrote Vitruvius, the famous Augustan architect, 'applied carefully to the plaster surface while it is still damp, does not fade, but lasts for ever.' The technique is ordinary fresco; but at Calleva *fresco secco* appears to have been in more general use. This is an allied process which demands less haste and skill than 'good' fresco. The wall-plaster, already dry, is damped with lime-water before the colours are applied in some suitable medium such as milk, details of the designs being often added in a thicker paint, by brush-work. The surviving colours are of mineral origin, and include white (lime), black (carbon), blue (glass frit, coloured by copper), green (*terre verte*), and yellow, orange, red and maroon (ochres) – or various mixtures of these to produce intermediate tints. Their state of preservation is astonishing, and

one feels that it would have astonished Vitruvius also, despite the essentially unchangeable character of the pigments.³³

The Roman-Britons had a great love of colour, which we see reflected in their gimcrack enamelled jewellery from Belgium, their mosaics and their frescoes – even the guard-houses of the West Gate had painted walls. At Calleva, red and yellow together were firm favourites for wall-decoration, but all combinations of colours were used in a rainbow assortment which at first sight seems to us quite garish. We should not forget, however, that Roman rooms were larger than the run of ours, that the areas of colour were wide and, as far as we can judge, well-balanced. It is not possible to give many details of the schemes of decoration, for plaster is nearly always found smashed to small pieces, and reconstruction is very seldom practicable, even on paper. The commonest method was to divide the area into panels of different colours, separated by vertical bands or pilasters, with a pink, blue or yellow dado beneath, speckled very often in imitation of marble or figured stone. The panels, plain or sometimes containing golden-yellow draperies, were sometimes additionally outlined by striped or fancy borders. A few examples will suffice.

A frieze from xiv, 1³⁴ consisted of a band of maroon 15½ inches wide (Fig. 29, opposite) decorated with alternate hollow squares and circles, linked by ears of barley and other floral motifs. The designs were marked out by a point before the ground colour was applied. This panel has been partly reconstructed and can be seen at Reading Museum. Another, from v, B3, had a bright-red ground bearing white, yellow, and blue flowers;³⁵ and in xxvii, 1 there were panels alternately of white with painted draperies, and yellow, separated by broad red bands. Below this there seems to have been a pink marbled dado and, somewhere, a white frieze with green circles. In the apsidal room of the same house, the walls were white with light-yellow stripes,³⁶ rather like a Victorian bedroom, just as the wall from v, B3 recalls the splendours of a Victorian parlour.

Fragments of marble linings were found scattered about the town – white, green-and-white, pink-and-white, or Purbeck – and in Insula v some scraps of quarter-inch sheets of royal Egyptian porphyry were discovered.³⁷ There is nothing to suggest that they were used on domestic walls, and the richest houses are significantly silent on this point. Some are strays from the Forum-



29 Wall decoration (dado) in xrv, 1. After Fox.

Basilica; others, it may be suggested, decorated articles of furniture such as candelabra or tables.

Floors. As has been noted in passing, floors were found of rammed gravel, clay or chalk, mortar, *opus signinum*, tiles or *tesserae*. The richer houses generally had at least one mosaic, or patterned tessellated floor. On many occasions, no floors were found. They may have been rooted up, through various agencies, of which the chief is the plough; but many must have consisted merely of the natural surface, gravel and quite good, covered with straw or rushes. Only thus can we explain the several inches of filth mixed with pottery, bones, coins and other objects which accumulated to a surprising extent in rooms devoted to menial purposes. The dirt of many a Callevan kitchen compared ill with the scrubbed and tidy living-rooms.

Wooden floors at ground-level were not unknown. In *Insula xvi*, a patch of gravel was found, crossed by several bars of black material which marked the position of the floor-joists.²⁸ Such a method of construction is bad, for the timbers were inevitably a swift prey to rot. It is the only recorded Silchester example, and it is interesting to observe that an essentially similar floor was laid as recently as about 1870 in a cottage near Reading visited by the writer.

Mosaic Floors. All of us know the present state of decay of buildings destroyed in the air-raids of 1940-1 – the heavy rubble, the luxuriant elder and willow-herb – and our Roman buildings at one time must have looked very similar. It seems quite remarkable that mosaics have survived in many cases almost undamaged – or indeed with any recognizable pattern still in place. Their discovery is always attended with wonder and interest, and one of the Cirencester floors was actually reproduced on a commercial scale (in the useful medium of floor-cloth) by an enterprising Bristol manufacturer shortly after its discovery in the middle of last century.³⁹

Calleva is well provided with mosaics. About 30 houses have them, some but one and others several. With few exceptions, the patterns are purely geometric, almost the only figure subjects being dolphins (xxiii, 2)⁴⁰ or *canthari* – double-handled bowls in which wine was mixed (xiv, 1 etc.)⁴¹. These are so common that they almost cease to deserve classification as figure-types at all; but it is in such models that regional peculiarities are discernible. For example, the *canthari* of the Atrebatian area differ from those found, say, further west. They have disproportionately small bell-mouths, while those of Somerset are rather better balanced.⁴²

There are colour-lithographs of most of the Silchester mosaics in *Archaeologia*, mainly from tracings made on the spot by George Fox. The motifs are few, their combinations many, and as far as this book is concerned a general description will serve for all. Without exception, the mosaics are set within a broad margin of one-inch *tesserae* of red tile (sometimes larger or smaller), here and there speckled with black, white or buff. The purpose of this margin was to set off the patterned portion, but it also served to protect the latter from damage by the feet of chairs, couches or tables. The mosaic proper is almost invariably made of smaller cubes, half-inch or under, according to the exigencies of the pattern, and may measure more than 15 feet a side. The designs are contained within an outer and an inner border, enclosing panels and medallions of oblong, square, hexagonal, circular, semi-circular or other shapes. The small spaces between the medallions are filled with devices reminiscent of marquetry-work or with motifs of the sort found in the medallions themselves. These are very simple, and comprise roundels, rosettes or star-shapes formed of stylized *smilax* or 'ivy' leaves for the most part. The arrangement of the medallions is usually diversified symmetrically: thus if a mosaic contains

four corner medallions A, B, C, D, and a central one, E, then A and C are identical, and so are B and D; but E, being in the middle, is different and in most cases rather more complex.⁴³

The borders are generally delimited by plain black-and-white bands, and the number of patterns used is also very small. Foremost is the twisted or braided rope pattern (guilloche), the component strands of which are laid out in graduated colours between black outlines. A particularly handsome example is in xxiii, 2.⁴⁴ Other border-patterns are waves and triangles (xxiii, 2, xiv, 1).⁴⁵ The best example of a fret is in the pavement of the apse in xxvii, 2,⁴⁶ where it is worked in green and skilfully adapted to the curvature of the panel which it contains. An entire floor of xiv, 1⁴⁷ is devoted to black-and-white fret, with fillings of crosses, diamonds, chequers etc. in the same colour. A later degenerate version of this type occurs in the Christian church.⁴⁸

To these remarks there is one exception: the mosaic already mentioned, found below xix, 2 (Pl. 11, p. 80).⁴⁹ It is beyond question the finest of the Silchester mosaics, and part of it (recently relaid) can be seen on the floor of the Silchester Gallery at Reading Museum. The remainder is still on the wall of another gallery. As we have it, it consists of an oblong western panel, 15 by 3½ feet, and a second panel 15 by 13 feet, both bordered in black and with the usual creamy-white background. Unfortunately the mosaic was found to be much damaged, but even so it may not have been completely unearthed. It seems to be meant for a room about 20 by 30 feet, but the usual coarse margin was not discovered; neither was an oblong third panel on the east which is demanded stylistically to balance the first, and which may still await discovery on the site. The explanation of this circumstance can only be that the excavators regarded the foundation-trenches of a *later* house (but still earlier than xix, 2) which coincided in alignment with the mosaic as the foundation-trenches of the house to which the mosaic belonged, but in actual fact these foundations truncated the mosaic.

The western panel displays a single motif: a large spray of *smilax* (*Smilax aspera*, L.)⁵⁰ – it is not ivy, for ivy has no tendrils – sweeping boldly from right to left, coarsely worked in black but of admirable formality and cohesion. *Smilax* is a Mediterranean plant, extensively used by the ancients for festive chaplets; but this stylized version, unique as far as is known on Roman mosaic, was probably

taken from a representation on a silver or Samian bowl and not from nature.

The other panel has wide borders containing a central square of about 9 feet, outlined by a simple guilloche of pleasing design, one strand red and the other grey. Very little remains of the designs. Two of the four corners retain traces of heads or busts, and one of the side-compartments exhibits part of an animal, one of a pair, supporting what was almost certainly a *cantharus* between them. Two sides of the border remain fairly entire, and there are traces of a third. The scroll with a central standing Cupid on the left was almost certainly repeated on the right. It is of delicate work, and was compared by Fox with Pompeian examples and dated accordingly. The comparison is just, but although *heavily* floriated scrolls are generally 'late', Fox's dating cannot be substantiated. No mosaic in Britain can in fact be assigned to the 1st century, and such dated floors as there are (e.g. at Verulamium)⁶¹ suggest that the style and technique of this specimen are much later.

The fragments of the top border are possibly all that survives of a formalized hunting-scene. The top of a conventional tree, with black and yellow leaves, can be seen and also part of the flying coloured cloak of a huntsman. This border has been very strikingly compared by Dr David Smith with an example found at Frampton (Dorset). If his reconstruction of the fragmentary design is correct – and it seems to be so – our mosaic may well be of 3rd-century date or even later. The Frampton mosaic is undoubtedly of the 4th century.

The cubes used in the Silchester mosaics are all of British materials, and their bright appearance (especially when damp) is due to the juxtaposition of contrasting colours. The following materials have been observed:

black:	Kimmeridge beds (Dorset)
buff:	sandstone
grey-green:	Purbeck marble (Dorset)
lime-green:	sandstone (Rhaetic, west country?)
pink:	limestone (Dorset); Samian ware
purplish:	burnt tile
reds:	tile, variously burnt
yellow:	limestone; tile
white:	lias limestone; hard chalk

Various intermediate shades could be obtained by burning some of these materials, for example grey, as used in the pavement just described. The use of glass *tesserae* was unknown at Calleva.

The cubes were knapped on the spot, and Joyce found some short sticks of sawn chalk which had been used to manufacture cubes for the floors of the first Basilica.⁵² Elsewhere he discovered a small iron instrument resembling a sugar-hammer which, by modern analogy, he considered to be a mosaicist's tool.⁵³ How the floors were laid is a matter for conjecture. Most of the coarse work was no doubt done direct: the *smilax* spray was probably set out thus, directly on the mortar bedding, its white background being filled in afterwards. Again on modern analogy, some of the finer work may have been composed by gluing cubes face-down on a piece of cloth, sections thus assembled then being cemented into place and the backing stripped off. Errors are frequent, and so is clumsy work, and must indicate that inexperienced workmen were often employed.

According to Vitruvius, mosaics required a graduated foundation of some depth, based on rubble;⁵⁴ but a few inches of poor mortar laid on the natural surface, covered by a couple of inches of finer stuff in which the cubes were set, is all that is often found e.g., II, 1).⁵⁵ In XIV, 1 the foundations follow the Vitruvian prescription better, and this example may be quoted:⁵⁶

Cubes and fine brick-mortar	1 inch
White cement	4 inches
Concrete	7 inches
Gravelly yellow mortar	8 inches
Flint pitching	<i>depth not given</i>
	<hr/>
	20+ inches

A small drain occasionally appears at floor-level in some of the mosaic rooms, generally piercing the wall in some obscure corner.⁵⁷ It is nearly always made of an *imbrex*-tile. Its purpose was clearly to carry off water used in washing the floors, in order to prevent it lodging between the tesserae where in time it might rot the substructure. It was not intended primarily as an aid to easy house-work. When a mosaic at the Kingsweston (Bristol) villa was being relaid in its original position, a very similar drain was supplied although it had not existed in Roman times. The new

bedding was of Portland cement; how necessary such drains must have been is apparent when the shortcomings of ancient cement are considered.

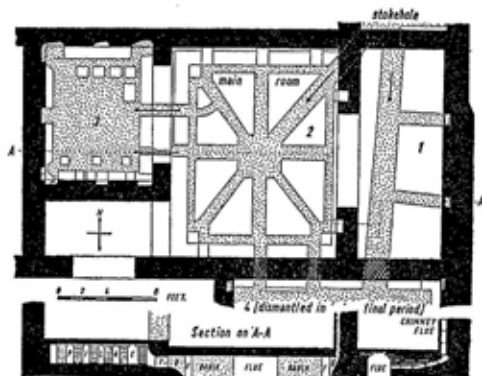
Tile-and-Tesserae Floors. This chapter may be closed with reference to a type of pavement often wrongly called *opus sectile*. In fact it consists of tiles moulded to various shapes, designed to fit together in a honeycomb pattern, or so placed as to leave small interstices which are filled with tesserae. The two Silchester floors of this kind occur in Insula xxiii,⁵⁸ and are extremely ugly. We are grateful that the experiment – for that is what it must have been – did not become fashionable, though such floors are well suited to the hard wear of a vestibule. The example in xxiii, 1 betrays a standard of craftsmanship so deplorably low that one is surprised that the owner evidently agreed to put up with it. The allocation of tiles of various shapes has been quite wrongly used. Part of this floor can be seen in Reading Museum.

Homes

From the architectural and structural details to which the last chapter was almost wholly devoted we pass to a consideration of some of those things which turn a 'house' into a 'home' – although some of the subjects, such as water-supply and drainage, might easily be considered hang-overs from Chapter 6.

Heating and Lighting. Hypocausts have already been described in connexion with the Public Baths and *Mansio* and need no further comment. Pl. 14, p. 81 and Fig. 30, p. 158 show an interesting example in XIX, 2 where superfluous heat was economically utilized to warm a second room.¹ Rooms without hypocausts were heated, when necessary, by the simple expedient of bringing in a brazier of charcoal which, when properly kindled outside, could be relied upon to burn (with invisibly poisonous fumes) for an hour or two without more attention. Because braziers were constantly replaced on the same spot, some of the mosaics display discoloured patches which were sometimes serious enough to need repair, effected either by setting new tesserae – a patch which always shows – or by replacing the burnt portions with tiles. Both methods can be seen on a mosaic from XIV, 1² now in Reading Museum. There is not much evidence to support the belief, commonly held, that discoloured patches on the mosaics were caused by squatters having kindled fires on them except, perhaps, in XIV, 2. Braziers and blazing fallen roof-beams occasioned most of this damage. In some houses, fireplaces were found, built against the walls – as in XXVII, 1.³ This method of heating is very unusual in Roman-British houses.

Small pottery oil-lamps and candles supplied artificial illumination, and to judge by the relative frequency of candle-holders the latter method was by far the more popular. Metal holders, mainly iron, were made to be driven into walls, affixed to wooden blocks, or to stand free. One is of caltrop form, with four arms, three of



30 'Overflow' hypocaust system in XIX, 2 (final state). Excess heat from Room 2 was utilized to warm Room 3. Room 1, a heated vestibule, was formerly probably only a stoking chamber for the destroyed hypocaust of Room 4, whence Rooms 2 and 3 were both heated through adits blocked in the final state of the system. Room 4 may have had an auxiliary furnace originally.

which must always rest on a flat surface and leave the fourth upright to hold the candle. The candles do not seem to have been of very great thickness, and although some may have been made of beeswax it is likely that tallow dips were in more general use. The lamps burnt olive oil, and consist of a small reservoir with a spout or burner, where a twist of flax etc. acted as wick. Two specimens have multiple burners and one or two early examples bear mythological scenes. Many of these lamps were needed to provide adequate lighting, and parts of standing candelabra have been found in some parts of Britain, though not at Calleva. The little lamps became very hot, and pottery, iron or leaden holders were made for them. An object from the great hoard of ironwork discovered in 1890 combines the functions of lamp-holder and candlestick.⁴

Fire was kindled by flint or pyrites (a piece of which was found in 1956) and steel, but the Collection contains no certain examples.

Water Supply. No arched aqueduct strode across North Hampshire to Silchester, and none was needed. Water sufficient for the

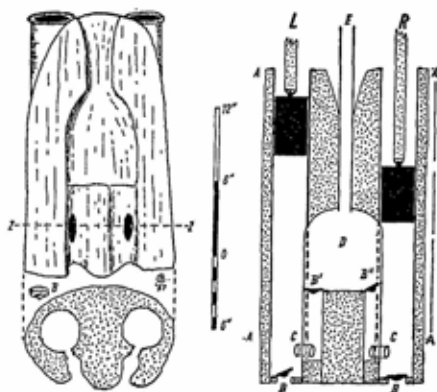
needs of the population of the town was readily available at the junction of the gravel subsoil and the underlying beds of sand and clay, and was obtained from wells. Several of these were found in every insula. They varied in depth from about 8 to about 30 feet, according roughly to the lie of the land; but most were from 17 to 23 feet. There seems to have been little change in the level of the water-table since Roman times,⁵ and these wells, therefore, were constructed to hold between about 5 and 11 feet of water, even in a dry season. The shafts were $2\frac{1}{2}$ or $3\frac{1}{2}$ feet in diameter, and were generally stined with flints for some depth. Below the steining there was usually a wooden lining of split oak boards (once, alder) pugged behind with clay, which rested upon a wooden curb at the very bottom. In a well of Insula 1 parts of the stone cover were found, with a circular opening $16\frac{1}{2}$ inches across.⁶

Careful scraping of the old surface around the well-mouths would probably have brought to light the filling of the wide shafts initially sunk, as well as the post-holes for windlass-frames and roofs.

The wooden linings were sometimes very well preserved, a height of 13 feet of boarding being recorded.⁷ The timbers were radially split planks, roughly dovetailed together (once, slotted into corner-posts); another kind of lining employed old barrels from which the ends had been removed. Two of these (from Insulae xvii and xviii) are in Reading Museum. They are about 6 feet high and $3\frac{1}{2}$ feet in girth, and are made of silver fir from the Pyrenees.⁸ They no doubt came to Calleva full of Bordeaux wine. It was safe enough to sink wells through gravel, but some kind of revetment was required when layers of sand were encountered; and it is probable that the barrels were used for this purpose.⁹

Many interesting objects were found in the wells: bronze bowls, a bronze jug, and many whole pots. The waterlogged, oxygen-free sludge at the bottoms of the wells, tannin-laden, perhaps, from the oaken sides, preserved articles of both metal and organic materials in a most remarkable state. Among the latter may be included part of a basket, rope, shoes, pieces of wooden objects, sticks, leaves, seeds, and even unfortunate beetles which fell in and were drowned.

Water was usually hauled up by hand, but in a pit below one of the walls of xrv, 1 the remains of a reciprocating force-pump were found.¹⁰ They consist of a much-decayed oaken stock and two



31 The Force Pump (xiv, 1) as found, with cross-section on Z-Z and diagrammatic reconstruction. *AA*: leaden piston cases (note that they clear the holes *CC*). *B*: weights from leather clap-valves. *CC*: holes for communication between cylinders and reservoir, *D*. *E*: rising-pipe. When the left piston rises, suction causes the valve *B* at the base to open, *B'* to remain closed. Water enters, the right piston is lowered at the same time, and the basal valve *B* of this cylinder is closed. *B'* is opened, and water is forced into the reservoir and thus up the rising-pipe *E*.

leaden cylinders and a valve-weight. The stock is at present 22½ inches long and of 9 by 12 inch section; the cylinders, or piston-cases, are 22 inches long with flanged upper ends and of 3-inch bore. They fitted holes which pierce the stock on either side from top to bottom. More than 6 inches have been lost from the length of the stock owing to decay, for the cylinders do not contain piercings to correspond with the holes leading to the central reservoir hollowed in the stock, and must therefore have stood free of them.¹¹ The reservoir is bell-shaped, about 7 by 5 inches, and from it rises the supply-pipe or 'trumpet' as the Romans called it.

This kind of pump worked only when immersed in the water it was designed to lift; and when in operative order contained two pistons which worked reciprocally to force a continuous supply of water into the reservoir by means of alternately opening and clos-

ing flap-valves at the lower ends of the cylinder-holes. The pump is shown opposite together with a reconstruction-drawing. It is the only surviving British example of a type well known from its description by Vitruvius and invented by Ctesibius of Alexandria in the 2nd century B.C. Specimens have been found on the Continent.

The leaden cylinders, like all Roman metal piping, were not manufactured in the modern way, i.e. by extrusion, but were made of sheet metal wrapped round a mandril and the joints soldered together. Together with another Silchester find they form the first recognized remains of Roman soft-soldering ever discovered. It was more usual to self-solder or 'burn' the joints of leaden piping.¹²

Running eastward through the Town Wall from the ditch outside, a Roman water-main was found.¹³ It was traced for about 800 feet inside the town towards an incompletely excavated building below III, 1. The pipes were made of wood, about 7 feet long, the only trace of them being the iron collars which had formerly joined them one to another. These were $4\frac{1}{2}$ inches in diameter, $1\frac{1}{2}$ inches wide, and had a central stop-ridge; they were hammered into the ends of the pipes. The pipes may have been bored by hand or by a powered appliance, perhaps a drill geared to a water-wheel.¹⁴

The west end of the main appeared to be connected in some way with a mass of masonry lying on the brink of the wall-ditch.¹⁵ This could not be examined properly, but it seems reasonable to suppose that it supported a cistern permitting a gravity-feed to a tank in the building below III, 1, and that the tank was kept full by means of another force-pump utilizing the water from the ditch.

Drainage and Waste-disposal. Apart from the street-gutters and occasional wooden drains which served to carry off waste water there was no proper drainage system at Calleva; nor do any of the houses seem to have been provided with drained latrines. Refuse was dumped in pits dug for the purpose, and the insulae are honeycombed with them. Like the wells, these pits contained many archaeological treasures. One in Insula XXII yielded a complete flanged pewter bowl, inscribed VENVSTAE VAS,¹⁶ *Venusta's bowl*, and another, probably, the fine silver spoon in the Collection (Fig. 37, p. 189), which is inscribed in a shaky hand L PRIMANIE, *Primania's sp* ...¹⁷ Both these objects belong to the

4th century, and were obviously thrown away by mistake; but from the pottery and glassware intentionally discarded when broken, whole vessels can very often be restored. The pillar-moulded polychrome glass bowl in Pl. 18, p. 97 is an example. It was found in 16 pieces, but only one or two minute splinters were missing.¹⁸

Furniture. Being made mostly of perishable materials, very little Roman-British furniture has survived, and we are forced to rely largely on sculpture to show us what it was like. An excellent and well-illustrated book on the subject has appeared recently,¹⁹ and it is not necessary to go into many details here. Calleva has supplied its quota of evidence in the form of some fragments made of a more durable substance than wood, namely Kimmeridge shale from Dorset. This is a bituminous material, otherwise not unlike slate in appearance, greyish or brownish-black in colour. When fresh it can be carved or turned with great facility, although the resultant articles become very brittle during their lengthy sojourn in the ground, and are apt to split and flake when unearthed. This seems to be due to the oxidation of their oily constituents, and the conservation of shale is one of the great problems of the archaeological laboratory.

The objects concerned are three in number: a small table-top,²⁰ a claw-foot,²¹ and a couch-leg.²² The first is lathe-turned and about 15½ inches in diameter. On the underside can be seen two of the three housing-joints where the legs were attached. To judge from a complete leg found at Dorchester,²³ the table would have stood about 18 inches high. The Dorchester leg has a claw-foot and bears an animal-mask carved in Celtic style on the knee. Several other legs of the same sort have been found in Britain, and their connexion with occasional tables rather than with chairs is amply demonstrated by monumental reliefs showing banquet-scenes in which such tables play a part. Our second object is in fact the claw-foot of one of these legs, and closely resembles the Dorchester specimen – indeed more closely than any other. The couch-leg is again turned, and in this respect is unique in its material. It is 9 inches long, and incomplete, but bears two sets of transverse mouldings and a broken tenon at the upper end. These objects are broken, cracked and splintered now, but it is not difficult to imagine them as once they were, smooth and wax-polished, the delight of some Callevan housewife. Shale was handsome enough

to be made into bracelets etc., as a south-country substitute for jet.

The only other remains of furniture comprise various accessories such as drop-handles, mostly of bronze, from drawers and caskets; cast bronze drawer- or cupboard door-knobs; ornamental hinges; upholstery tacks of different sizes and shapes; and ornaments, applied or for inlay, of bone, fretted or embossed bronze, *millefiori* and mosaic glass, and porphyry, marble and shale plaques.

These remains inevitably suggest furniture of an ornate style, but this is of course only half the story – if that. All plain wooden furniture, from bedsteads to book-cases, has vanished beyond trace, and so has almost every scrap of soft-furnishing material. Basic requirements change little, and *mutatis mutandis* the household catalogue can as well be imagined as listed.

Kitchens. The plan, structure, frescoes, roofs, floors, water-supply, drainage and even furniture of the Callevan house have been considered, but there remains a question so far largely ignored. That is the purpose of the various rooms. Unfortunately, rooms in a modern house are anonymous enough when bereft of their furniture and moveable fittings, and it is only fixtures like baths and sinks that enable us to be certain for what purpose the previous occupants might have used a room. In the ancient and all but eradicated ruins under survey, the task of identification is almost impossible unless traces of special installations or peculiarities of plan and appointments remain – always supposing that we can interpret them correctly when they are vouchsafed to us. Mosaics, hypocausts, and apsidal recesses serve to indicate the reception-rooms (as they have been vaguely termed in this book – we can only guess which were sitting-rooms and which were dining-rooms, or even which were libraries and studies, for surely someone at Calleva had these) even when the plan does not make them clearly stand out; small hypocausts etc. indicate bath-rooms; and the presence of occupation-rubbish, combined with floors of an inferior description or no floors at all, must often indicate kitchens and other service-rooms. The appointments of the reception-rooms have been examined above, and in this section it is the turn of the Callevan kitchen.

In a few cases, not more than eight or nine,²⁴ kitchens can be identified in a more satisfactory way than that mentioned above. Houses such as II, 2 or XIX, 2 contain rooms which fulfil the

specified requirements and also exhibit masonry foundations built against a wall, which, with a little imagination, can be interpreted after Pompeian discoveries as those of kitchen dressers or raised hearths for cooking. It is also possible that a few of the fireplaces already mentioned were for cooking rather than for heating, although some (e.g. xiv, 2) were intended evidently for the latter purpose alone. One particularly curious circumstance may be noted. In xxvii, 1²⁵ a room contained a fireplace, and several pots had been sunk into the tessellated floor as if for cold-storage of food-stuffs. They contained lamb's bones and a fish vertebra; and scattered about the room were quantities of chicken bones. But the use of this room as a kitchen is quite uncertain. A 'votive' explanation of the deposits may be preferable, as similar finds have been made in a temple at Verulamium. A room similarly appointed was found in xxxii, 1.²⁶ Single empty pots buried in floors of other houses may have been soak-away latrines.

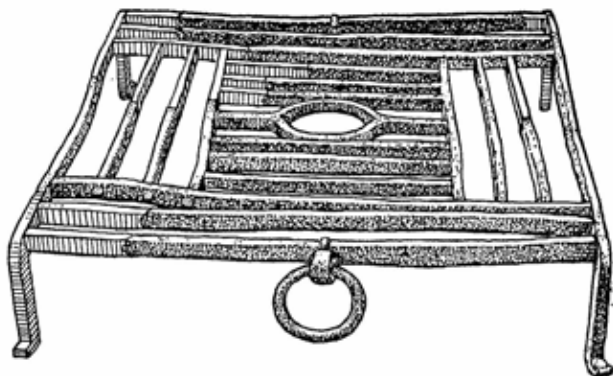
A few of the isolated buildings belonging to various houses may have been kitchens, and for other culinary installations we can point only to an oven found in Insula xxiii, well away from any known house, but possibly adjacent to a timber building not found by the old excavators. The oven consisted of a large pot laid on its side, embedded in clay, and it bore strong traces of fire within.²⁷

From the kitchens themselves we pass to some of the equipment used, for which there is plentiful evidence. Foremost, as a rare find, may be mentioned the gridiron (Fig. 32, opposite) buried with the 1890 hoard of ironwork.²⁸ It is made of iron bars, $\frac{3}{4}$ by $\frac{1}{2}$ inch full section, 18 by 17 inches square and 4 inches high. It has two iron drop-handles, and the circular expansion of the bars in the middle was probably intended for the reception of a small-based pot. This gridiron was for use over a charcoal fire, perhaps on one of the masonry platforms alluded to. Other vessels meant to stand in the embers of a cooking-fire include some bowls on tripod legs. An iron tripod has also been found, as well as a perfect pair of iron pot-hooks (Fig. 33, p. 166), still usable today,²⁹ and parts of elaborate iron cauldron-chains of Belgic type but 3rd or 4th century in date.³⁰

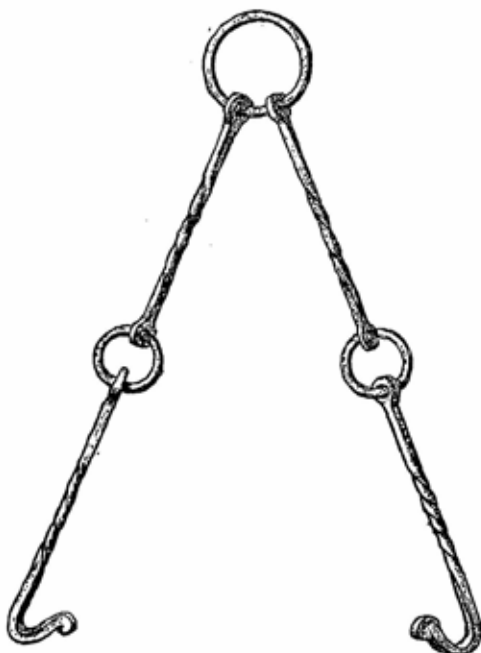
Several metal cooking-pans were discovered, including a *patera* or saucepan, with a heavy, moulded base and a silver-plated rim;³¹ tinned copper bowls;³² two copper frying-pans (*sartagines*) 7 and 9 inches in diameter respectively;³³ a bronze cauldron, paper-thin,

raised from a single piece of metal, with an iron rim-binding for strength, much patched;³⁴ another shallow cauldron;³⁵ and a perforated wine-strainer.³⁶ Pewter and white-metal vessels – the poor man's silver plate – include a bucket,³⁷ biconical wine-flagons,³⁸ and cups, as well as the flanged bowl already mentioned. Of wood, there are parts of many buckets, mainly of fir, and a basin made of bent oak like a cheese or butter tub.³⁹ Most of these articles came from the pits and wells.

Earthenware was extensively used in Callevan kitchens, and occasions when dinner was spoilt by the pots cracking on the fire must have been numerous. There are flagons, jars, bowls, mugs, pie-dishes, and honey-pots, as well as strainers, cheese-squeezers, mortars, and storage-vessels. Two of the last bear assessments of their capacity, scratched on the shoulder – *IIIS ($4\frac{1}{2}$ congii [?], or 3 gallons, 3 pints), and VI =, ($6\frac{2}{3}$). The latter vessel is one of the largest found, $22\frac{1}{2}$ inches high and 22 inches wide; and from the circumstance of its having been discovered on the day of the Queen's Jubilee in 1897 it is known as the Jubilee Pot.⁴⁰ It was buried in a corner of a room in XVIII, 1. It is of New Forest ware and belongs to the 3rd or 4th century. Another storage jar, made



32 Gridiron, 1890 hoard. (One-quarter actual size.)



33 Pot-hooks. ($\frac{2}{3}$ actual size.)

(as often) from an oil- or wine-*amphora* by removing the narrow neck, is labelled AVIIN (*Avena* = oats).

The *mortaria* are generally made of a fine creamy pottery and were studded inside with grits to assist the grinding of fruit, vegetables and other foodstuffs for soups, purées, etc. They have very heavy rims to resist cracking, and a spout. They vary between 8 and 36 inches across. The rim sometimes bears the maker's stamp, such as MATVGENVS, Q VALERIVS VERANIVS, or F LVG[VDVNI (*Made at Lyons*). One complete specimen still retains a consolidated mass of fruit-stones and pips from the last purée made in it.⁴¹ Rubbers for the *mortaria* were made of L-shaped

pieces of Purbeck marble or occasionally from the cylindrical butt of an *amphora*.

An article essential to the Roman kitchen was the corn-mill or quern. Those from Calleva were made of Old Red Sandstone conglomerate from Somerset or the Forest of Dean, from other sorts of sandstone, or, for lightness, very often from Mayen lava, in which there was a considerable trade from neolithic to mediaeval times.⁴² The querns are 12 to 18 inches in diameter, sometimes larger, and consist of two discs of stone pivoted one on the other. The lower stone was fixed, with a convex, striated upper surface and a central iron spindle. The upper stone, concave and striated on its underside to fit the lower stone, was provided with an iron or wooden handle. There was a central hole into which the grain was fed, and the weight of the upper stone was carried by a transverse bar fitted across the whole and containing a bearing for the spindle. The weight of the upper stone did not therefore rest directly on the lower stone, and if it had done so, the corn would have been crushed and not ground into flour. The conical grinding-surfaces and the striations helped the flour to make its way down to the edges of the stone, where it was collected on a clean cloth. Experiments have shown that flour thus produced is surprisingly fine, and surprisingly free from grit; although a lifetime's use of it affected the teeth considerably. The skull of an elderly Callevan exhibits teeth which have been worn down almost to the sockets. Nevertheless, the teeth are free from cavities, a fact which may be ascribed to the rougher food and more sugar-free diet of ancient times. This is a common feature of ancient dentition.

Oil and wine were essential to Roman cookery, and the wine-casks and *amphorae* found at Silchester have already been mentioned. Fragments of *amphorae* are extremely common finds, and one or two nearly whole specimens have been found. Some, especially perhaps the oil-*amphorae* from Spain, are stamped with the name of the shipper and that of the estate of origin, e.g. L IVNI MELISSI F (*Lucius and Junius Melissus Bros.*) and F SCIMNIANO (*From the Scimnian Farm in southern Spain*). As we have seen, oil was required for toilet purposes and for lamps, as well as for cooking.

Salt must have been imported, perhaps from salt-pans on the Hampshire coast. The only sweetening agent was honey.

Table Wares (Pl. 21, p. 97; Fig. 34.) In this book it is impossible to give an adequate account of the pottery and glass table-wares in use, and much must be left to the reader's imagination; but a visit to Reading Museum will reveal the wide range of articles concerned. First and foremost is the Samian ware, red-glazed earthenware of fine quality, plain, or moulded with floral, human or animal figures. This was made in south, central and eastern Gaul from the 1st to the middle of the 3rd century, and was the successor of the Arretine ware mentioned in Chapter 2. Many of the vessels are stamped with the names of the potters. Then come many different sorts of pottery, bronzed (mica-dusted) or lead-glazed. There is also a fair quantity of black-glazed Rhenish ware, in some ways a successor to Samian, and equal to 18th-century Staffordshire products in quality. It is sometimes decorated under-glaze with piped animals and patterns, and over-glaze in white clay. One vessel has a motto, VITAM TIBI (*Long Life to Thee*). Rhenish ware was much imitated in Britain, at Castor in Northamptonshire and in the New Forest kilns especially. The Castor ware is famous for its flowing hunting-scenes of hounds chasing hares or deer, and the New Forest beakers are often coated with a vitreous maroon glaze.

Among the 500 or so whole and reconstructed pots in the Collection there is a baby's feeding-bottle in the shape of a small jug, with a nipple-like spout projecting from the side. It is of rough work, and in use the nipple would have been covered with skin or else waxed: a dangerous and insanitary object.

Little can be said about the glassware, which varies from a cut-crystal goblet with two handles, made at Alexandria in the 1st century, through plain and polychrome moulded bowls to later Gaulish and Rhenish cut-glass and blown vessels, some of which are extremely thin (Pl. 20, p. 97). One rare fragment comes from a *diatreton* or goblet carved from a solid mass of glass and consisting of a round-bottomed beaker enclosed within a delicate, fretted shell to which it is attached only at the rim and by various small supports around the sides – these being all that remain of the original thickness of glass between the inner and outer parts of the vessel. *Diatreta* are a little reminiscent of those Chinese ivory balls, carved one inside the other, and were undoubtedly as difficult, or indeed more difficult, to produce. In the late Empire their makers were protected by law in order that the craft should not die out.



34 ROMAN POTTERY. 1: Baby's feeding bottle. 2: Rhenish-ware beaker decorated *en barbotine*. 3: Pie dish. 4: *Mortarium* with gritted interior. 5: Cooking jar. 6: Flagon. (No. 2 one-half, the rest one-quarter actual size.)

Of commoner sorts, the Collection contains several bottles which must originally have come to the site full of wine or other liquids imported from Continental provinces of the Empire – the famous fish-sauce of Spain, perhaps, and vinegar or oil. Some of the bottles are square or hexagonal, to make for easy packing, and others round. One *barrillet* bears on its base the stamp FRO, which is one of a number used by a large bottle-manufactory in north-eastern Gaul, called the *Officina Frontiniana*, during the 3rd and 4th centuries.

Colourless glass was produced by adding manganese to the mixture of sand-and-soda used, and other minerals provided browns, blues, greens, purples and so on, clear or opaque. Many vessels are decorated with blobs and applied threads of coloured glass, and it is much to be regretted that so very few survive entire – most vessels being represented only by a single fragment. The soda-sand glass, still used at Murano, is especially ductile and wholly suited to the art of glass-blowing, which was invented in Roman times. The cutting, or rather grinding, was done with the aid of emery, Pliny's *naxium*, either in the form of small pieces or as an abrasive powder applied to metal tools. The possibility that rough sorts of glass were made at Calleva has already been noticed.

Gardens and Food Supplies. Mention of cooking-equipment, pottery and table-wares leads us on to the question of the food-supplies and the gardens where food was produced; although at the risk of some division of the subject, agriculture proper must be reserved for the next chapter. The open planning of the town was an invitation to turn unused ground into cultivated plots and gardens, and many of the house-courtyards must in reality have been laid out as formal parterres. Owing to the patience and devoted care of A. H. Lyell and Clement Reid we know a good deal about the *flora* of Calleva.⁴³ After 1898, the sludge at the bottoms of pits and wells was yearly examined for seeds and other plant-remains, and the result is an impressive list of species, several previously unrecorded before mediaeval times. As a whole, the list shows that there has been no appreciable change in either climate or *flora* since Roman times. It is mostly composed of wild flowers, weeds and trees, and there is a disappointingly small number of cultivated, or even merely edible, plants.

This is however only to be expected, as a solitary example of the

green pea, fortuitously carbonized, reminds us. We do not eat many vegetables when they are mature – run to seed – and it seems reasonable to suppose that the Romans did not do so either. The seeds of most vegetables, when they are ready for the table, are too soft to stand much chance of being preserved unless somehow carbonized. The rarity of wheat and other cereal grains at our site is to be explained in this way.

Edible wild plants of native origin include celery, carrot, Good King Henry, parsley, fennel and coriander – the last two used, like parsley, as herbs for seasoning. Cultivated plants, the existence of which may or may not point to Roman influence, comprise the pea, a parsnip of type intermediate between the wild variety and that grown today, and possibly the turnip. Plants of Mediterranean origin, and possibly introduced by the Romans, include corn-salad and the seasonings dill, opium poppy, and chervil. Maw-seeds from the opium poppy are quite harmless and were probably sprinkled on bread. Seeds of grape and fig were also found, and these – certainly the fig – may have been imported in dried form. Vines however grow quite well in the open air in this country, and there is some evidence to suggest that they were cultivated here in Roman times; so the Silchester pips may have come from home-grown fruit.

Fruits of native origin comprise blackberry, raspberry and strawberry (wild); elder, crab-apple, sloe, gean cherry, a plum, and the bullace, one a cultivated strain; hazel-nut also occurred. Introduced varieties are a small medlar, a small plum, black mulberry, and perhaps the damson. To these might be added the stone-pine which yields *pinocchi*; the cones were used as altar-fuel, and may have been imported from the Mediterranean. The tree grows in Britain today.

How many of the wild plants and trees were protected or even cultivated, without much being done to improve the varieties, is quite unknown. But however primitive and undeveloped they may have been, it is pleasant to imagine the houses of Calleva set amid their blossom in the spring-time, shielded by box or cherry-laurel shrubs in the heat of midsummer, or surrounded by bright-berried hawthorn, holly, and dog-rose later in the year – seeds of all these have been found, and those of other trees besides. No cultivated strains of flowers were found, but the rose, violet, St John's wort, mallow and foxglove are decorative enough to keep

a place in the corner of many a modern garden, and so perhaps they did at Calleva too.

Animal Foods. Bones of all the usual food-animals were found, and beef, veal, mutton, lamb, pork, sucking-pig, goat and kid were evidently consumed in fair quantity. Cows and goats of course yielded their dairy products. Bones of hare, red-, roe- and fallow-deer, and wild boar point to hunting-expeditions around the town. Of poultry, remains of the barnyard fowl were abundant, but duck, widgeon, grey goose, woodcock, grey plover and even stork and pheasant are also in evidence – the last, of Roman introduction, perhaps not kept for food. Fish-bones and scales were also not uncommon, and those of dace, eel, perch, pike, grey mullet, herring and sea-bream have been recognized. Shell-fish, always a favourite item of Roman diet, were also eaten, especially oysters – natives from the Thames estuary, much esteemed at Rome; shells of cockles, mussels, scallops, whelks and limpets are also known in Callevan contexts. The shell-fish were probably brought to the town alive, packed in jars of sea-water; the sea-fish may have arrived in the same way, but the possibility of dried, smoked, or salted fish must also be considered likely.⁴⁴

The Romans ate with knives, spoons and fingers. The spoons are mostly of bronze, tinned or plain, but the Collection also contains a few examples made of silver, iron or pewter. Spoons were, in general, of lighter construction than they are today, the stems being round in section, thin, and pointed, and the bowls are rarely larger than those of good-sized modern teaspoons. The bowls of some (Fig. 37, p. 189) are elongated, rather after the fashion of a modern jam-spoon, and are joined to the stem by a moulded neck. Other spoons have shallow, circular bowls, and may have been used for eating eggs. It is said that the pointed ends were used for eating shell-fish or snails, edible varieties of which were found.⁴⁵

Pets. Bones of both dog and cat occurred at Silchester and their paw-marks are frequently found on tiles which had been laid out to dry before baking. Two breeds of dog seem to have existed – a large one, not unlike a greyhound, and a smaller variety. Probably they worked for their livings as well as being domestic pets. Cats' bones are rarer, but the animal (no doubt a Roman intro-

duction) was quite definitely the domestic cat and not merely the wild cat, of which bones were also found.⁴⁶

This chapter and the last have taken us a long way, and all that remains to complete our survey of ancient Silchester is a brief view of the industries and trade of the town, the economics upon which its existence was based.

Economic Life

The reasons which governed the choice of site for the northern capital of the Atrebates belong to the misty period of Belgic tribal struggles and were, as we have seen, of local force.¹ The military advantages of Calleva were those of a stronghold set within dependent territory: tactical rather than strategic, defensive and not offensive. In some ways, the town was no more than an outward sign that the northward penetration of the House of Com-mius was meant to last. Economically the position amply guaranteed the means of subsistence, but at first little more. It would be truer to say that it gathered trade to itself than that it was placed to exploit existing trade-routes; the Loddon lay too far to the east, the Kennet too far to the north, for their crossings or water-borne trade to be dominated effectively, and it is unlikely that any important overland routes passed by the site until the town was founded about the beginning of the Christian era.² Then, as finds of imported pottery and British coins show, matters changed, and by the time when the 'Belgic defence' was built, three if not four distinct lines of access had come into being.³

The Roman Peace had far-reaching effects upon the economy of Britain. For the first time the wealth of the island could be viewed in more than parcel lots and its economy developed upon a province-wide scale. This was made possible by the network of good, built roads which linked the farthest corners of the province to the capital; and, as Calleva lay at a focal point of this network, it could now profit by the development of relations farther afield besides serving as a local market. Retail trade became important, and some of the shops where it was conducted have been found. The local pre-eminence of Calleva also leads us to imagine that various manufacturing industries were carried on there, and this is so; but their remains do not on the whole suggest that they served needs other than those of the immediate neighbourhood. Life remained, however, firmly based on the two essentials of corn

and cattle; these, together with metals, are given as principal British exports in the time of Augustus,⁴ and their importance remained undiminished throughout the succeeding Roman period.

Since agriculture continued to lie at the root of the economy, it is not surprising to find that the attempt to create a densely urbanized settlement at Calleva failed. Even on the 100-acre scale, the town was by no means fully built-up, and the fact is a warning not to over-emphasize the value of the commerce mentioned above.

There are indeed remains suggesting the practice of agriculture on a considerable scale within the walled area itself, and it seems certain that some of the large houses were nothing but elegant farmsteads with land outside the town. Beyond much doubt, the empty spaces of the *insulae* were also farmed, planted, or turned into paddocks (p. 170) and, in short, despite a generous façade of Roman buildings and Roman ways, the town remained essentially unchanged in its economic status from pre-Roman times.

POPULATION AND AGRICULTURE

In the course of Chapter 6 (p. 142) it was pointed out that house-plans offered a convenient basis for assessing the permanent population of the town, especially since it would appear that by far the greater number of Callevan houses were of one storey only. If this is so, the number of rooms available for bedchambers – the crux of the matter – is not large when deductions have been made for reception-rooms, kitchens, vestibules, service- and store-quarters and the like. Even in the largest houses there were perhaps not more than six or eight bedrooms. It is unlikely that more than one or two persons would occupy a single bedroom in houses such as these, however crowded sleeping accommodation was in the small dwellings; the Callevan family unit, therefore, may be estimated at 8 to 12 persons, and with slaves and servants perhaps at not more than about 20. Taking the full total of houses as 300, and assuming that 200 were occupied at any given moment – the remainder being either derelict or not yet built – we reach a population of some 4,000. The calculation is of course highly speculative, for it is inevitably based on assumptions which it is impossible to verify, and a Roman census might have given a different and perhaps smaller total.

This figure of 4,000 means that an area of at least 5,000 acres, or thereabouts, was annually sown with corn for its support⁵ – part

down to winter and part (probably more than half) down to summer crops. The standing stubble was no doubt used for cattle-fodder, and their manure served to enrich the arable fields.

The only cereal physically in evidence at Calleva is wheat, probably bread-wheat, and we possess only a few carbonized grains of this;⁶ but from discoveries elsewhere in the province and from the general picture of British crops at this period, it is highly probable that at least one other form of wheat, spelt,⁷ was widely grown. Other cereal crops would have included barley and oats. The crop-pattern would thus have been similar to that of the Silchester region today.

Finds of barley are rare in Roman-British contexts, although its cultivation must have continued no less extensively than in pre-Roman times, when a barley-ear was even used as a device on coins of Cunobelinus. The possibility that it was no longer used for bread may be responsible for our lack of finds; since if it were grown merely for fodder or for brewing it would not have been threshed, and consequently not heat-dried to assist threshing. The actual grain which has survived from Roman Britain is all carbonized, and carbonization was the result of accidental fires, mostly at corn-drying establishments. Oats are represented at our site not by grains but by a fragment of a large storage-jar – an amphora cut down (p. 166) – inscribed with the word AVIIN (oats). This cereal was not cultivated in Britain until Roman times.⁸

Cereals were not of course the only crops. The fruit and vegetables mentioned in Chapter 7 were probably cultivated on a small scale in gardens rather than elsewhere. A possible exception is the pea, which would have grown well on heavy ground, and the same would be true of the Celtic bean, not actually in evidence at Calleva but represented at Roman Verulamium.⁹ The haulm of both pea and bean was valuable for fodder and for kindling. Another possibility, flax, is to be noted: it may have been of considerable economic importance.¹⁰ The only scrap of cloth from Calleva is of linen.

The great profusion of the bones of cattle, sheep, pigs and other domesticated animals indicates that large herds were kept. One deposit of the jaw-bones of oxen represented over 2,500 beasts,¹¹ but since the deposit was of industrial origin (see below, p. 192) it is questionable whether such a large number came exclusively from farms belonging to the townsfolk. Some of the buildings

within the town may have been byres, some of the yards stock-yards; and the 'annexe' to the Outer Earthwork examined in 1956 may have been used as a cattle compound in its later days. The sleeper-beams of sheds roughly butted against the rampart were found in two cuttings. The breeds of cattle and sheep, as might be expected, were inferior to those of our own day. The oxen were 'Celtic shorthorns'. Their bones make it clear that the varieties were smaller, on the whole, than our own.¹² The ox was of the greatest economic value, serving as the main draught animal, and providing dairy-products, meat, leather, bone, horn, and glue.

We are now brought face to face with a problem. Where was this arable and pasture-land situated? Unfortunately the problem is insoluble by the means at present at our disposal, and only the most tentative suggestions can be made. One piece of evidence – although its interpretation is by no means certain – is Grim's Bank on Padworth Common, which seems to have delimited the Callevan lands in the sub-Roman period (p. 81). If it perpetuates earlier arrangements, and if we may accept the bold assumptions (a) that Callevan economy was on a 'subsistence' level and (b) that the *territorium* was coterminous with the necessary arable, pasture and woodland acreage, it may be that the *territorium* extended about 1½ miles to the north-west of the town, or 2 miles from the Forum. The greater part of this area lies on light, gravelly soils and some of it may have been subjected to the plough in Roman times. Long and heavy iron plough-coulters, however, show that ploughs capable of dealing with the richer, heavier soils to the south and east of the town were available – indeed coulter of this type are unnecessary in light soils. We may confidently infer, therefore, that some proportion of the arable acreage was situated on the heavier soils.

There is very little trace of Roman-British buildings for about 4 miles south of Silchester, except at Haines' Farm (p. 207), and for a considerably greater distance to the east. The absence of settlements may roughly indicate the extent of the *territorium*, but it is quite uncertain that the cultivated ground extended so far. Indeed, recent work on the settlements of the Basingstoke region has shown that little progress was made with the clearance and occupation of the area covered by dense forest during the period under survey;¹³ and if this was true of the villas it was probably also true of the town-lands. A belt of virgin forest may therefore have

existed between the Callevan arable and the nearest separate domains at Sherborne St John, where the London Clay extending southwards from Calleva gives place to lighter and more easily cultivable soils. It was in any case advantageous to the economy that a considerable tract of forest should be included within the limits of the *territorium*, for the forest maintained herds of swine and deer, and supplied timber for building and fuel. Nearly all the woodwork from Calleva is made of oak from this rich source.

Many years ago it was suggested by Colonel Karslake¹⁴ that the ancient outline of the town-lands was preserved by the outer boundary of the parishes of Silchester and Mortimer West End (4,136 acres). The boundary is still marked by a green lane (The String) on the south-west of Silchester, and thence by footpaths and hedgerows for some distance to the south and east; it reproduces the polygonal outline of the Roman town in a very striking manner, and lies at the approximate distance of a Gaulish league (*leuga*, 11 furlongs) from the Forum. The *leuga*-radius is found in early French law applying to the 'liberties' of towns (*banlieues*) and in a country where so much of earlier arrangements was taken into Merovingian and Carolingian practice it is likely enough that this is a genuine Roman-Gaulish survival. In our case, it was suggested that the *leugata* became the area of a Saxon manor with its boundaries more or less intact.¹⁵ But all this is very uncertain. The distance is much greater than a *leuga* to the north and north-west, and excludes Grim's Bank. If our own estimate of the required arable land (5,000 acres) approaches the truth, the *leuga* radius is too small, and that from Silchester to Grim's Bank (producing an area of 6,320 acres) may or may not be adequate. There is no reason to believe that the *territorium* extended even roughly the same distance on all sides, and further speculation is a waste of time.

AGRICULTURAL BUILDINGS, INSTALLATIONS AND IMPLEMENTS

The absence of farm-houses (*villas*) near Calleva and the traces of agricultural practice recovered within the walled area go hand-in-hand to establish the fact that the *territorium* (whatever its area) was farmed directly from many of the town-houses, especially perhaps from the large ones.¹⁶ Houses such as I, 2, XIV, 1-2, XIX, 2, XXIII, 1,

xxvii, 2, or xxxiv, 1, have large walled yards suitable for stock-keeping etc., and there are generally out-buildings within those yards to which it is tempting to assign the roles of barns, byres or stables. In particular, a building at the north-west corner of xxiv, 2, and another at the north-east corner of xxiii, 1, are of a type recognized by Dr Shimon Applebaum as characteristic of Roman farms in Britain, Gaul and Germany.¹⁷ The small enclosed yard with adjoining buildings to the south of the main part of xxxiv, 1 invites an agricultural explanation, and many of the isolated blocks scattered up and down the length and breadth of the town also deserve notice in this connexion. Some may have been granaries. Failing further exploration of the buildings themselves it is impossible to say more at present.

We are on far firmer ground with a corn-drying furnace and various implements. The furnace is T-shaped, and is built across the south wall of an abandoned building in *Insula xxxiii* (B 3). The installation consists of a main flue about 12 feet long and 2½ feet wide, tapering towards two short flues at right angles at the south end.¹⁸ These side-flues, which project just beyond the ruin, acted as chimneys for a fire kindled in the main flue. This was bridged by flags or large tiles, and the corn to be dried was heaped on top and turned now and again to prevent scorching. The walls of the ruin served, no doubt, as a wind-break.

This type of furnace is a hallmark of late Roman agriculture and although no burnt grain is recorded as found in the present instance, other British examples contained greater or lesser quantities, the result of careless manipulation of the corn, or the appliance itself, causing outbreaks of fire. One or two specimens had a double floor, added to ensure better distribution of the heat and a lower temperature. The very wet summer of 1956 showed how valuable corn-drying plant can be in this country, and the Roman furnaces may have been largely used when natural ripening of the crop was uncertain, and it was cut before it had time to become fully mature. While this may often have been the case, it is also thought that these furnaces played a most important part in the processing of certain kinds of wheat, notably spelt, the chaff of which was difficult to remove by ordinary threshing-methods unless first made brittle by heat.¹⁹

Several other furnaces at Calleva may also have been corn-dryers. Although the T-shaped type remained the standard, others

of different plan were found at the Hambleden villa. The intention was to increase the area of the warm surface and so permit more corn to be handled at a time. A furnace built into a room of XXXI, 1 (which was presumably derelict at the time) is not unlike the so-called 'gridiron' furnace found at Hambleden. Its central area is however larger, and the floor above needed support.²⁰

Further evidence of the processing of grain is provided by the pits and wells in which plant-remains were preserved. Seeds of about 20 weeds of cultivation, such as corn-cockle, were recovered from them in fair quantity, occasionally in association with grains of wheat.²¹ It is evident that the corn was carefully cleaned of these unwanted additions after threshing, and the rubbish thrown away to be found and studied so many centuries later. It is almost needless to remark that if the bulk of corn used at Calleva had been imported such deposits would be lacking: the sale of uncleaned corn is unthinkable.

The two great ironwork hoards of 1890 and 1900 (p. 186) contain interesting examples of agricultural implements, and others were found during the general course of excavation. The most important are the plough-coulters already mentioned. The function of a coulter, which is fixed in the plough-beam, is to cut a vertical slice through the ground. This is then undercut horizontally by the plough-share, and the resultant furrow can be turned either by means of a mould-board or other device affixed to the share-beam, or, in cases where such provision did not exist, by tilting the plough sideways.

The Silchester coulter (cf. Fig. 35, p. 183) are six in number; five of them come from the hoards and are presumably of 4th-century date.²² They are between 22 and 29 inches long, and the heaviest weighs about 10 lb. They consist of a long tang of iron bar, $1\frac{1}{4}$ inch square in section, chamfered, and forged at one end into a triangular blade up to 9 inches long and 4 inches wide. They demand a plough-beam perhaps as much as 4 or 5 inches in cross-section, and also presuppose that the plough-beam was considerably raised from the ground. Although the cutting-edges of two of these coulter are centrally placed, on four they have been produced by beating out one side of the original iron bar only, and have a decided set to the left. Ploughs using these coulter were thus able to bite deeply to the land-side, and consistently turned their furrow to the right. In the field, the effect must have been

very similar to standard British ploughing today, resulting in the production of 'lands' or ridges.

The only share (Fig. 35, p. 183) from Silchester is $4\frac{1}{2}$ inches long and just under $2\frac{1}{2}$ inches wide at the cutting-edge, and has flanged sides to grip the tapered end of the share-beam.²³ It worked almost horizontally.

The weight of the kind of plough envisaged has been taken to mean that the beam was supported by a wheeled carriage and not by the yoke of the oxen used to draw it.²⁴ There is at present no evidence either way; concerning the second alternative, it may be pointed out that the burden on the oxen was directly proportional to the balance of the implement, good or bad. This is all that can be said with certainty about the Silchester ploughs. They were evidently capable of dealing with the stiffest soils, and here a swing-plough has advantages over a wheel-plough.²⁵ Another suggestion which has been made is that the 'heavy plough' was of Belgic introduction. There is no evidence to prove this, and out of 16 coulter 11 or 12 are fairly definitely of late Roman date.²⁶ It may be, therefore, that the 'heavy plough' belongs essentially to the later 3rd and 4th centuries, when the villa-system developed a high efficiency. Whatever else may be inferred from its existence, it is certain that the farmers who used the Silchester type of plough had ample capital, tools, and labour at their disposal.

Other agricultural implements from Calleva include spade- and shovel-irons, narrow two-pronged forks, portions of scythe-blades, sickles, pruning-hooks, and mowers' anvils – the last-named mainly from the hoards of ironwork. Other objects which may be grouped under the same heading are a farrier's rasp and a buttrice (an instrument formerly used to trim horse's hooves).²⁷

That spades and shovels were made of wood with iron merely at the edge is not due to the scarcity of metal but to the difficulty of making the blades rigid enough to withstand the considerable leverage applied to these tools. The irons were shrunk on, or attached by nails, or fastened by both methods. They are grooved inside to provide a good seating for the wood. The forks resemble a tool used in viticulture, and it will be remembered that grape-pips were found on more than one occasion at our site. But such implements doubtless had many purposes, and it would be rash to ascribe them to any one.

The scythe-blades have a stout rib to counteract any tendency

to bend, and nicks in the edge were removed by hammering-out. The mowers' anvils were taken into the field for this very purpose. They consist of a short iron bar, pointed at one end, flat at the other, which was driven into the ground as far as short brackets projecting about a third of the way down. These brackets prevented the anvil from sinking further into the ground when blows were applied. The anvils no doubt served a variety of purposes in the field.

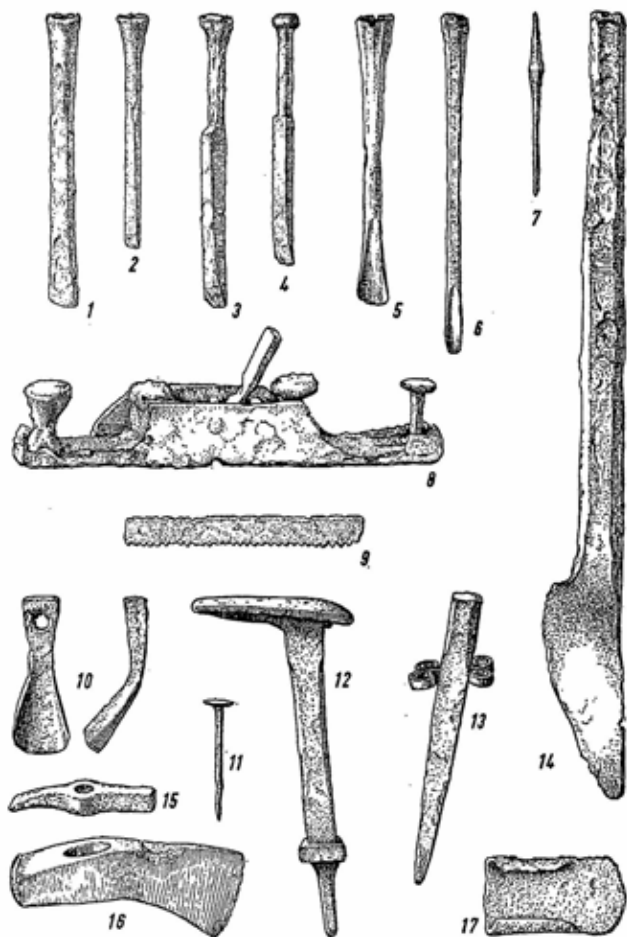
METALLURGICAL INDUSTRIES

Iron. Iron-smelting is attested at Calleva from the beginning of the Roman period, if not before. The most important source of ore was probably iron-pan, a concreted material formed largely by percolation, which occurs in the gravel of the district. This ore was easily reduced in the primitive form of furnace in use at Calleva, which consisted of a clay-lined hollow in the ground, filled with a mixture of ore and charcoal, and capped by a clay dome. Bellows provided the necessary draught, and reduction (at about 1,450–1,650° F., much below the melting-point of iron) was complete within a few hours. The result was a spongy mass of metallic iron and slag, which needed prolonged beating at red-heat to become a consolidated 'bloom' free enough of impurities for use.²⁸

Remains of such a furnace as that described were found during the 1955 excavations. It belonged to the early 2nd century and was situated on the levelled bank of the 'Belgic defence' at the north-east corner of Insula xxiii. It is one of the few recognized traces of smelting-furnaces at our site.²⁹ The slag, however, is everywhere and trenches are never opened without lumps of it being found.

Reduction may sometimes have been carried out with coal and not with charcoal. Lumps of coal are occasionally found at Calleva,³⁰ the source probably opencast workings in Somerset.

At first sight, it might appear that the iron industry was of great importance and produced metal in quantities sufficient for export. But there are no slag-heaps like those which mark Roman working in the Weald and the Forest of Dean; moreover the ore is scattered in small deposits unsuited to commercial exploitation. Slag is found on Roman sites of every kind, wherever ore is within easy reach; and except at main centres of the industry it does not mark production on more than a petty scale, which can have served



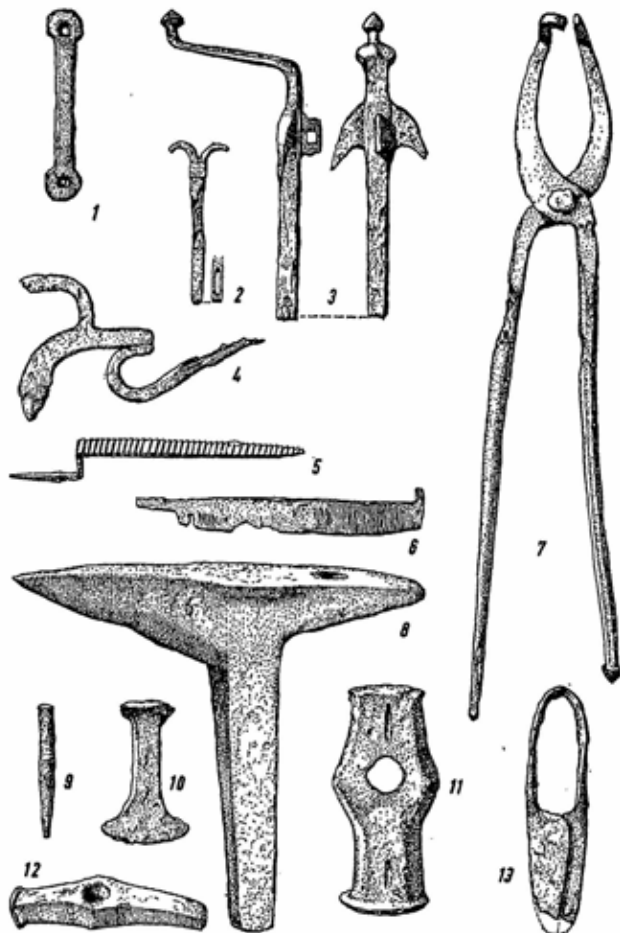
35 IRON OBJECTS from the 1890 and 1900 hoards etc. 1-4: Chisels (socketed, mortise etc.). 5-6: Gouges. 7: Bit. 8: Iron-cased jack-plane. 9: Saw blade (fragmentary). 10: Cooper's adze. 11: Nail. 12: Cobbler's foot. 13: Field anvil. 14: Coulter. 15: Light hammer. 16: Axe. 17: Ploughshare. (All one-fifth actual size.)

nothing but the most immediate needs of the smith, and perhaps not all of those.

The blacksmith's craft was fully understood at Calleva, and the reader will have noticed frequent references to iron tools and implements in these pages. A selection of smith's tools – drawn mostly from the two ironwork hoards – is shown opposite.

Many of the iron tools from the site are exceedingly well preserved, and could at a pinch be put to their original uses today.³¹ Many others are thoroughly corroded and require the greatest care in excavation and after-treatment. Between these extremes there is a large class of objects which, though badly eaten by rust, still keep much metal. To prevent the continuance of corrosion, it is necessary to strip away the rust so that the core can be exposed, neutralized, and coated with a preservative wax or lacquer to exclude the air. Afterwards it is often possible to see how each tool was made. Wrought iron is never homogeneous, for impurities (mostly slag) inevitably remain between the fibres of the metal and at the lines of junction between separate bars when forged together. When the whole surface has gone and the impurities have been loosened by decay and by the process of rust-removal, the formation and structure become apparent. Thus an axe was made by taking a bar of wrought iron (itself laminated), bending it double, and welding it into a strip; the strip was then bent in half, a mandril inserted between to make the haft-hole or eye, and the iron welded together into a solid mass.

Recent metallographic examination of one of the Silchester axes (from the 1890 hoard) showed, contrary to expectation, that it had not been hardened at the edge by quenching and tempering, but only by the hammering necessary to produce the requisite thinness. It might be suggested that the tool had never been used, and was awaiting further treatment; but this is not the case. The axe-head is of a medium-carbon steel; the carbon was included from the smith's hearth during the repeated forgings of the metal from which the tool was made. Presence of carbide granules increased the hardness near the edge, but not to any great extent.³² As pieces of wood from Calleva show, Roman axes and other tools bit deep and true, but the absence of a hard cutting-edge is of some interest, and it would be most useful to have details of other edged tools in the Collection for comparison. The non-specialist might be permitted the reflection that axes of the American pio-



36 IRON OBJECTS from the 1890 and 1900 hoards etc. 1: Nail-heading tool. 2: Small linch-pin. 3: Stepped linch-pin. 4: Buttrick (the gouge-like blade is above the figure). 5: Farrier's rasp. 6: File with saw-setting nick. 7: Blacksmith's tongs. 8: Blacksmith's anvil with bick and tool-hole. 9: Drift. 10: Sate. 11: Striking hammer. 12: Small hammer. 13: Shears. (All one-fifth actual size.)

neering days were made of much softer metal than it is customary to use today: in rough work it is better to restore the edge of a tool by continual sharpening than to risk its being shattered on some unseen stone and only with effort restored.

The ironwork hoards have often been mentioned in this book and this is a suitable place in which they may be described in more detail. They are both smith's hoards – that is to say, they contain his stock-in-trade, scrap (many of the objects are worn and broken) and new or unfinished items which he was preparing for sale. The 1890 hoard comprised 66 objects and was found in a pit in Insula I.³³ The 1900 hoard of over a hundred objects was found in a well in Insula XXIII.³⁴ The earliest photograph of the 1900 hoard, taken shortly after discovery, seems to show that it had been wrapped in a cloth before burial: under a powerful lens, the imprint of woven material can be seen on some lumps of rust now vanished. The contents of the hoards may be tabulated:

Blacksmith's Tools

	1890	1900
horned anvil (20 lb.)	1	—
tongs	1	2
sledge hammers	—	2
hammers (light, also carpenter's)	3	10
cold chisel	—	1
sates (chisels)	—	2
drift (punch)	—	1
nail-heading tools	—	2
files (4 with saw-setting nicks)	2	4
rasp (farrier's)	1	—
buttrice	—	1

Stock

bars (wrought or plain)	4	4
sundry	various	various
scrap	various	various

Carpenter's Tools

axe-heads	2	1
adze-heads (one, cooper's)	2	1
chisels, mortise (socketed, all but one)	6	3
gouges (socketed)	5	—
plane (iron-cased jack)	1	—
centre-bit	—	1
dividers	—	2

Agricultural Implements

coulters	2	3
mowers' anvils	4	8
forks (narrow)	—	2
hipposandal (scrap)	1	—

Cobbler's Tools

cobbler's feet	2	1
----------------	---	---

Miscellaneous

sword-blade (scrap)	1	—
spear-head (scrap)	—	1
cook's gridiron (scrap)	1	—
cauldron chains (scrap)	—	3
candlestick-lampholder (scrap)	1	—
large padlock (scrap)	—	1
linch-pin	—	1
pocket-knife (broken ?)	—	1
scale-beam (bronze)	1	—
steelyard-weight (bronze)	—	1
copper pans (scrap)	—	5

(one fused)

It is curious that one hoard should contain a bronze scale-beam (perfect, not scrap) and the other a steelyard-weight, but coincidence, if coincidence it be, extends to more than this. In a way, the contents of the hoards seem complementary — essential parts of the smith's own equipment, for example, are split between the two. The deposits lay not more than about 150 yards apart, and if both had a single owner the mass of material involved might have obliged him to make use of two places of concealment. This suggestion is supported by the fact that both hoards are of very similar date. As pottery found beneath them indicates,³⁵ they were both deposited not earlier than about the middle of the 4th century. A hoard very much like these in both content and date was found in 1854³⁶ at Great Chesterford on the site of a Roman town.

Silver, Bronze, and Lead. The working of non-ferrous metals at Calleva appears to have depended exclusively upon ready-smelted supplies: the ores were too distant for it to have been otherwise. With an important exception described below, silver-working was on a very small scale, and was confined (so far as can be seen) to the manufacture of trinkets. The Collection contains

an unfinished finger-ring, a small, partly-used strip,³⁷ and a few droplets, all of this metal but very impure. Other objects – a torque, pins, spoons – may or may not have been made at Calleva. The most likely source of metal is the coinage: bullion produced from the argentiferous lead of Mendip and other regions was government property, and may not have been available for general use.

Bronze-founding was more extensive. Its remains comprise crucibles, a mould for a ring, ingates (bits of metal which had filled the inlet of moulds), spoilt work, droplets, and a mass of scrap. Manufactures included, perhaps, certain classes of brooch, steel-yard-weights, and other objects which it is not easy to identify among the very numerous bronze articles from the site. Cold-working of bronze from sheet-metal, and also lathe-turning, should receive notice. In terms of essential production, however, the importance of the industry was slight, and none of the best bronzes from Calleva was made there.

The lead industry was of greater practical importance, but signs of manufacture are few. The industry supplied sheet, pipes, and sundry other objects such as weights. Soft-solder was also in use, and, as has been noted above, our site yielded the first recognized traces of it.³⁸ The source of lead was probably desilvered pigs from the Mendip mines, and, except for a discovery in *Insula VIII*, the few pieces of galena found from time to time might be regarded as curiosities only.³⁹

Silver-refining. So far in our account of Callevan metallurgy we have met with few surprises. The processes described have been of the most commonplace type and such as might confidently be expected. For the conclusion of this section, however, we turn to something of a far different order, which more impressively demonstrates the capacities of Roman metallurgy. Three buildings – two houses and a shop (*VIII*, 4, *IX*, 3 and *XI*, *BI*) – yielded certain metallic cakes which, though dull and uninformative in appearance, proved upon analysis to be of great interest.⁴⁰ They are in fact the residue of working hearths for the extraction of silver from argentiferous copper and the removal of copper from impure silver. The process involved is known as cupellation, and requires the complete oxidation of lead and other metals to leave pure silver behind: if impure silver is mixed with lead and heated to the



37 SOME MISCELLANEOUS FINDS. 1: Bronze balance-arm (1890 hoard), graduated for use as a steelyard (see inset for method of use). 2: Part of a bronze steelyard-arm graduated for use with different counterweights. 3: Complete small bronze steelyard (see inset for method of use). 5, 6: One- and two-ounce weights (bronze with silver inlay). 7: Steelyard weight (bronze, 1900 hoard). 8: Bronze plummet. 9, 10: Iron knives. 11: Iron clasp-knife with bronze-bound antler handle. 12: 'Primania's spoon' (silver). (All one-half actual size.)

required high temperature, a mass of fusible lead oxide (litharge) is produced into which all other impurities, such as copper, dissolve, and a cake of silver is left.

In ordinary cupellation, such as was practised at Roman mines, the litharge was absorbed by the porous furnace-linings and was reconverted into lead afterwards. The Silchester finds, however, showed for the first time that the Romans employed bone-ash in the process. This substance has the properties of resisting the corrosive action of molten litharge and of absorbing it as blotting paper absorbs water. Its use is attested by the presence of phosphate of lime in some of the residue, which could have been derived from no other likely source.

It is unnecessary to describe the remains in detail, for the material from Insulae IX and XI was examined by Professor William Gowland and his report appears in the *Archaeologia*. As we have it, the residue marks intermediate stages in the process; and it is likely that the mass of alloy charged into the furnace was not refined in one operation but required several repetitions of it, owing to the insufficient use of lead. A small globule of the pure silver, embedded in litharge, proves that the process was brought to its conclusion.

One of the hearths was so porous that granules of the original alloy sank into it without first becoming oxidized, and this accident enables us to infer the source of the argentiferous copper used in the refinery. The proportion of silver to copper is very like that found in coins issued during the period of inflation in the middle of the 3rd century, about 4:96. These or later coins may therefore have supplied the original metal, and in support of this suggestion it may be added that the Collection contains a few coins of Carausius (287-293) partly melted down.

It is quite unknown whether the Silchester refineries were official government establishments or not. Gowland believed that the physical and chemical processes indicated operations on a scale more suited to a public than to a private concern; but the private – and possibly clandestine – nature of the work seems indicated (a) by the absence of proper buildings where the process might be carried on and (b) by the apparent refining also of argentiferous lead in one case (VIII, 4). Official desilvering of lead was always done at the mines, or if not there, at the mints; and there is no evidence that a mint existed at Calleva in Roman times.

This lump of argentiferous lead suggests that the few pieces of unsmelted or smelted galena found at our site were unofficial exportations from the Mendip mines.

OTHER INDUSTRIES

Potting. Little has been said in this book about home-produced pottery although many different kinds of imported table-wares have been described. The Roman-British potting industry was in fact a very flourishing one, and the standardization which it achieved in its products might lead the casual observer to imagine that it was organized (as it is today) mostly at a few main centres. Wide differences in the fabric of vessels, however, point to regional dispersion of the craft, wherever suitable clay was available – and few regions are without it.

Two kilns have been found at Silchester,⁴¹ to the north-east of the town. They date from the end of the 1st century and are of small size and typical updraught construction, partly set into the gravel. Each had a roughly circular or oval combustion chamber and a domed oven above, separated by a pierced clay diaphragm or floor supported from below on a pedestal. A short firing-flue, also domed, communicated with the chamber from a stoking-hollow outside. The kiln-structure was of clay reinforced by the addition of waste scraps of pottery, grass and ling.

One kiln was about 32 inches in internal diameter and had walls 5 inches thick. A little of the dome remained in place, enough to show that it was about 40 inches high. The pierced oven-floor was 6 inches thick and stood about 16 inches above the bottom of the combustion-chamber. The stoking-flue was about 30 inches long, 11 inches wide and up to 15 inches high; its walls were only 2 inches thick, but were buried below the surface. The floor sloped upward from the flue to the far end of the chamber. The other kiln lay quite close and was of similar dimensions.

During firing, the pots stacked in the oven were exposed to the full heat and gases of the fire, which entered through the vents in the floor and passed out through a hole in the dome. After firing the pots were removed through a breach in the dome, which was made good by pugging with clay fortified by waste pottery, mainly lids.

The pottery⁴² made comprises in one case ordinary grey necked jars and in the other ring-necked jugs, deep and shallow bowls,

dishes and lids. These are in a sandy ware not very common at Calleva. One kiln contained four complete but spoilt examples of necked jars and the other a complete but overfired dish and a biconical beaker or jar.

All these vessels were wheel-made and so were almost all the pots found at Calleva. There is however one important class – so common that it might be regarded as the Silchester Ware of the 1st century – which was handmade, or at best finished on a turn-table. The fabric of these pots is rough, soapy to the touch, and laden with small particles of burnt flint; the forms are mostly bead-rimmed cooking jars, lids, and large storage jars with outbent rims. The vessels are unevenly coloured or fumed, and the conditions under which they were made were evidently primitive in the extreme.

Tanning. The extensive deposit of ox-jaws in the north-west corner of Insula vi,⁴³ mentioned above in another connexion, may be considered in the light of this heading. The area covered by the bones – without exception jaw-bones, apart from a few shoulder-blades and some early Roman domestic rubbish – was perhaps as much as 1,250 square feet. The deposit was 14 inches thick in one part. This enormous midden lay below Block 1, which was built on the Forum alignment and probably belongs to the end of the 1st century; it must therefore be earlier, probably substantially so.

It is clear that the source from which this deposit was derived was not entire carcasses (for then other bones would have been present in large numbers) but flayed hides with the heads still attached. This may point to tanning, the lower jaws being removed before the preparatory steeping process was begun.

In the same Insula, remains of a wood-lined tank were found in House 1,⁴⁴ but this cannot be connected with the midden because of a disparity of dates. It was thought at the time when the heap of bones was found that if there had been a tannery in the area of Insula vi the outflow would have polluted the water-supply of the Public Baths in Insula xxxiii, lying on lower ground to the immediate south-east; but the deposit of jaws was almost certainly in existence before the Baths were built, and the objection can therefore be ruled out.

In the yard to the south of xxxiv, 1, another wood-lined tank was found,⁴⁵ 62 feet long and from 3½ to 5 feet wide, with a platform of

stout oak planks, 7 feet square, at the west end. Some ox- and horse-skulls were found in the soil overlying this platform and the tank possibly represents a further step in the production of leather – the skulls having been removed when the condition of the hides permitted it, after steeping and before they were placed in the tan-pit. No trace of tan or tan-pit was however forthcoming.

In xix, 2⁴⁶ there is a pair of tanks (if indeed one is a tank and not a square corn-dryer) and a deep, wood-lined pit, 12 by 10 by 6 or 8 feet, which may have been respectively steeping-tanks and a tan-pit. Several other tanks were found, but tanning is not the only process which involves steeping: for another, we might instance the treatment of flax.

It is difficult to over-estimate the importance of leather in Roman times; the army alone made huge calls on supplies, needing it for tents, jerkins, boots, and other purposes. Civil uses were just as many. Numerous leather sandals and shoes (most of them, even those of children, heavily hobnailed) have been found in the sludge at the bottom of wells and pits, and the 1954 trench over the Belgic defence produced, from a layer of Roman infilling, a gore and other scraps of a neatly-sewn garment of goat- or sheepskin.⁴⁷

Dyeing, Brewing or Baking. Scattered up and down the insulae, but especially concentrated in x and xi,⁴⁸ occur the remains of furnaces which are unlike the normal long hearths and other furnaces of Roman Calleva. They consist of a round combustion chamber about 30 inches across and, generally, a short entrance-flue, all well built of tiles laid in clay. Apart from signs of burning, nothing truly indicative of their purpose was found – no 'wasters' to make them into potting-kilns, no cinders or droplets to suggest another metallurgical industry in this quarter of the town, and tanning and fulling can probably be ruled out also.

The furnaces were not complete as found, and it was suggested that they had been built up into cylinders to sustain vats or cauldrons like old-fashioned laundry-coppers. From Pompeian parallels, the excavators came to the conclusion that the furnaces were the bases of dyeing-vats;⁴⁹ but although the Pompeian parallels prove that they are the remains of boilers or coppers, they do no more than this, and dyeing is not the only process to require hot water. Brewing might also be suggested;⁵⁰ and x, B6 resembles a building at the Belgian villa of Roncinnes⁵¹ which is thought to

have been devoted to this purpose. *Cervisia* or beer was very popular in the Celtic provinces of the late Empire. The Emperor Julian has an amusing epigram on it.⁵² Many of the hearths may, alternatively, have been those of ordinary bake-ovens.

The truth of the matter is that the record of these and other industrial remains, though good and careful for its period, is far from adequate by modern standards. What is needed is more excavation, to provide fresh evidence which may yield up its secrets fully by expert help and interest and by application of the scientific aids increasingly used in archaeology. Such help is not a one-way traffic: occasionally – as the recent Ministry of Works excavations at Chew Stoke Reservoir show – archaeological material is of value to industrial research.⁵³

MINOR INDUSTRIES

Milling. Most flour was ground at home by means of the hand-mills or querns described on another page. But there was one establishment, xviii, 3,⁵⁴ which seems to have been devoted to flour-milling on a large scale. The building concerned is early, and abuts upon the street at an angle. Down either side of a large shed or room opening off the street are circular bases of rough masonry, 4 or 4½ feet across and 2 feet high – three in each row, spaced 5 or 6 feet apart. These bases are much too big for timber posts supporting the roof, and perhaps large querns were placed upon them. Such an arrangement is found at Pompeii, but it is most unlikely that the large Pompeian hour-glass mills were used. They are rare in Roman-British contexts, and in our case heavy versions of the ordinary domestic querns are most likely to have been employed. The upper stone of one such quern, too heavy perhaps for domestic use, was found in Insula xiv – it was 28 inches across and 7½ inches thick. Two villa-sites at least have yielded even larger querns which were evidently part of some mechanical device, but examples have not been found at Silchester.⁵⁵

Spinning and Weaving. Finds of spindles, spindle-whorls, distaff fragments and a small clay loom-weight indicate the manufacture of cloth,⁵⁶ but on a purely domestic scale. The spindles are made of bone, the whorls of bone, shale, jet, pottery or stone; the distaffs are of jet. It is curious that only one loom-weight was found, and that a very small one, for fine work; but various small leaden

weights, or even stones, may have been used instead. On the other hand, since more proper loom-weights are not forthcoming, we may be dealing with a home industry producing mainly yarn for knitted garments or for export.

Other instruments, which seem to have been used either for carding wool or as weaving-combs to press down the weft, take the form of thin bronze plates, about an inch square, with several fine, sharp teeth filed along one edge. The making of braid or three-ply yarn or cord is denoted by triangular bone or bronze plates about $2\frac{1}{2}$ inches along each side, with holes at the corners. These served to space the threads evenly.

Bone and Shale. Bone, horn and antler were valuable materials, and were formerly used for many articles now made of plastics. There are many signs that the working of bone etc. was carried on at Calleva – off-cuts, unfinished pieces, and a number of shoulder-blades of sheep used for making eyelets. These were cut out by centre-bits, one type of which cut two concentric grooves at once. One of these shoulder-blades was found in the filling of the ditch of the 'Belgic defence' in 1954, and shows that the industry dates from the 1st century.⁵⁷

The articles produced were knife- and other tool-handles, pins, pegs, toggles, needles, counters, frames, combs, whorls, spindles, inlay, dice, labels, hinges and whistles. Some are rough, others elaborately carved, turned, decorated, and so well-preserved that they have been taken for ivory. This is not, however, the case: ivory has been found in Roman Britain, but not at Silchester. A perfect pick of stag's antler, identical with implements used two thousand years before in the flint-mines of Neolithic Britain, was a curious discovery in a well of Insula vi.⁵⁸

Two unfinished dishes of Kimmeridge shale, with chuck-holes visible, show that this was another material worked at Calleva. Sites explored in the area where shale was quarried have produced no evidence that anything more elaborate than armlets was made on the spot.⁵⁹ The rough material was evidently exported to Calleva (amongst other places) and turned into finished articles there. Both the table-top and the turned couch-leg mentioned in Chapter 7 may have been made there, and so may such other shale objects as the carved foot of a chair, trays, and a *patera*, in addition to armlets and spindle-whorls.

TRADES

Carpentry. Building and associated trades, such as mosaic-working, plastering, decorating – even, perhaps, glass manufacture – have been fully evident in our descriptions of the buildings of Calleva and scarcely need further emphasis. Nor do other trades, including carpentry and allied crafts; but the wealth of wood-working tools found in the ironwork hoards and elsewhere encourages us to pause a moment at this subject. As the tools in Fig. 35, p. 183 show, many forms are identical with those in use today – the socketed chisels and gouges especially. Others, like the axe and adze, do not form part of the regular equipment of the modern carpenter. The plane is the most interesting object, and is a rare find.⁶⁰ At a glance, it resembles the all-metal jack-plane of today, but this impression is false. It is nothing but a wooden jack-plane with an iron sole and casing. The blade is rusted at a very steep angle, probably not the original: but if so, it was held in place by a wedge at both back and front, bearing on cross-bolts which held the casing together. Alternatively, the iron rested against the rear bolt, which was covered with lead, and was supported by a larger wedge bearing on the front bolt only.

This plane is not meant for heavy work, and was probably used only on surfaces already roughly dressed by the adze, or on split planks. One adze, from the 1890 hoard, is a cooper's tool, and may point to the making of barrels at Calleva; but it was useful for any rough hollow work. Only two saw-blades were found, probably because such blades were too thin to stand much chance of survival. One belonged to some form of bow-saw, but, as a German discovery shows, metal-framed saws like modern hack-saws were also in use. A deep pit, probably a saw-pit, was found in Insula v,⁶¹ and the Collection also contains a sawyer's line-hook.

Other objects used by the carpenter are a perfect bronze plumb-bob, several iron dividers or compasses, and half a folding bronze foot-rule. This is square in section, and one face is graduated in *unciae* (0.97 inch), a second in *digiti* (0.73 inch) and a third in *palmi* (3 *unciae*, 4 *digiti*, a quarter of a Roman foot). The rule is not accurate.

Retail Trade. From the manufacturing side of industry we pass to the distributive. The Forum shops have already been described (p. 93), and others cluster to the north-west of the town, along the

north side of the main east-west street.⁶² They are long, rectangular buildings, from 55 to 70 feet in length and from 30 to 45 feet in width, and presented a gable-end to the street. The front, separated from the street by perhaps only a masonry or wooden counter, served for the conduct of business, and there were living and possibly also working quarters at the rear. Insula IX, B3 had a small hypocaust and XI, B1 a narrow passage which no doubt contained steps or a ladder to a store in the loft.

These shops appear to belong to the time of the New Town Plan, for they are squarely aligned with the street. For Old Town shops we must look elsewhere. A few obliquely-sited blocks may have been built as shops during that period, and there is a possibility that the subdivisions of VI, B1 were also small shops, with a veranda outside, after the fashion of the larger establishments in the Forum itself. Pieces of red porphyry were found in one, and, as suggested at the time, it may have been a lapidary's workshop or something of that kind.⁶³

It was in these shops that a great many of the products we have mentioned in this book were sold, and that many of the traders and craftsmen had their premises. The following table gives an idea of the range and number of the surviving imported articles handled:

IMPORTED OBJECTS FOUND AT CALLEVA

<i>Objects</i>	<i>Source</i>	<i>Purpose</i>
FOODSTUFFS:		
figs (seeds)	Continent	
olive oil (amphorae)	Spain; Italy	also for toilet and lighting
wine (amphorae; barrels)	Gaul; Spain; Italy	
poppy seeds	Continent	condiment
oysters etc. (shells)	Thames estuary; south coast	
grey mullet, herring etc. (bones, scales)	do.?	
BRONZE, GLASS, POTTERY ETC.		
bronze vessels	Italy; Gaul	
pewter	W. England?	

glassware	Alexandria; Italy; Gaul; Rhineland	
Samian	S., Central, E. Gaul; Marne	
Rhenish ware	Rhineland	
fine wares	Gaul	
mortaria	Gaul; England	
Castor ware	Northamptonshire	
New Forest ware	Hampshire	
STONE ETC.		
marble	Pyrenees; Italy; Dorset	wall-linings etc.
porphyry	Egypt	
Bath stone	Wiltshire	
building stone	various, England	
mosaic stones	various, England	
lava querns	Rhine valley	
coal	Somerset	industry
pumice	Italy?	skin-dressing; toilet?
lead, galena	Mendip	
MISCELLANEOUS		
pottery lamps	Italy	
engraved semi-precious stones	Egypt; the East via Italy/Gaul	signets
jewellery (gold, silver and bronze)	Gaul	
brooches (some)	Gaul; Belgium; N. England	
pins (some)	Scotland	
beads (some)	Gaul; Scotland	
bracelets (glass)	Scotland	
surgical instruments	Gaul; Italy	
enamels	Belgium; N. England	
bronzes	Gaul; Italy	
figurines (pipeclay)	Gaul	
jet (pins, etc.)	Yorkshire	
shale	Dorset	
realgar	India; Italy	pigment
blue frit	Continent?	pigment
alabaster	Egypt, etc.	jar

A general feature of late Roman economy was a great decline in trade between the provinces, for reasons which cannot be gone into here.⁶⁴ There are very many imported objects of late Roman date at Calleva, which was only a middle-sized town in a remote province; but they amount to but a fraction of the quantity of earlier imports. The torrent of such goods as Samian, wine, and oil seems to have disappeared or become a mere trickle, inadequately and unevenly enlarged by Rhenish and other imported pottery and glass, and home-produced tableware, beer and butter. In direct connexion with this decline it is interesting to observe that the main-street shops of *Insulae* x and xi did not survive in use until the end of the Roman period but were supplanted, and their derelict walls occupied, by the industrial processes to which we have referred – silver-refining and that mysterious industry variously described as dyeing or brewing. There was no longer sufficient trade in imported goods to justify their existence: it could all be handled by the Forum traders. We can imagine the shop-keepers on the main street putting up their shutters for the last time, one by one.

Roads and Transport

We now forsake the walls of Calleva and turn to the seven roads which led across wild heath and river and through sodden oak-wood to the town. The provincial road-system appears to have been completed in outline within a few decades of the conquest; its main lines radiated from London and divided at lesser nodal points (of which Calleva was one of the most important) in order to secure rapid and convenient communication between the capital, the various provincial centres, and the military zones of the north and west. The *Map of Roman Britain*¹ shows at a glance how admirably this great programme of construction was ordained. The needs of the new province – above all the needs of its garrison and policing forces, for the roads were primarily laid out for military purposes – were evidently viewed as a whole. The result, as might be expected, was vastly different from our present system of highways, which is largely the product of centuries of neglect and piecemeal local development. In some ways the problem which the Roman engineers had to face was simpler than that confronting the turnpike builders or, for that matter, road-planners today. The Romans could at least start from scratch, much in the same way as the railway-builders after them, considerations of land-ownership apart. Their difficulties were mainly confined to survey and construction, and the likelihood of hostile raids during the progress of the work: in short, conditions were not unlike those which obtained during the building of the American trans-continental railways.

As with the railways, the course of the roads was carefully surveyed and they were laid out in straight lengths from vantage-point to vantage-point where any necessary corrections to the general alignment could be made. Deviations from the straight are rarely found elsewhere, and then only as concessions to the terrain. Thus the London–Silchester road has only one major change of direction (27°) in its entire course – at Duke's Hill, Bagshot. The

general line was no doubt determined in each case by army reconnaissance at the time when the area concerned was conquered.

The roads are fairly easily traced, for the most part: they serve as foundation for many a fine stretch of modern motor-road, or else their course is preserved by sunken lanes, footpaths, county and parish boundaries, or hedgerows. Here and there the cambered causeway – the *agger* – is to be discerned, striding through woods and fields on its way to towns buried beneath the traffic of our city streets or to forlorn encampments of the Welsh and northern hinterlands. Well over 6,000 miles of Roman roads have been traced in this country; they still link the fallen towns and crumbled settlements of the province, however blind to their presence we may be when we go by road or rail to see these scattered vestiges of the past.

In the following pages, however, we are especially concerned with the course of the roads within a few miles' radius of Silchester, and not with their continuation beyond this area, nor with the general scheme. For these the reader is referred to Dr Ivan Margary's recent book on the subject.²

CALLEVA-PONTES-LONDINIUM (SILCHESTER-STAINES-LONDON)

We may begin our exploration of this important highway³ from the Silchester end, and in so doing retain the order of the 7th of the British routes in the *Antonine Itinerary*.⁴ We will take the road for the first, and the greater part of the second, of its alignments – from Silchester to Park Corner, Heckfield, $4\frac{1}{2}$ miles to the east, and from Park Corner to West Court, Finchampstead, $3\frac{1}{2}$ miles further on. Its course thence to Duke's Hill is straight, and as mentioned above it turns here to cross the Thames at Staines (*Pontes* – The Bridges) and enters London along the line of Oxford Street.

The East Gate of Calleva, set directly on the alignment, did not exist when the road was laid out, and the only entrance with which the road could have been concerned was the east entrance of the 'Belgic defence'. This was at the south-east corner of the later *Insula xxvii*, and thus about 200 feet north of the direct line; but as MacLaughlan's plan (Fig. 4, p. 53) makes clear, the road was aligned to the highest point of ground visible from the east, i.e. where the East Gate was to rise, in order to avoid declivities on the

south and north. Traces of the short length laid at an angle between here and the east entrance of the 'Belgic defence', and torn up when the street-plan was completed,⁵ were found in the old excavations. A like regard for the lie of the ground is shown by the roads south and south-west of Calleva, and it has been remarked that the Roman engineers must have found much food for thought in planning a road either into or out of the town, owing to these difficulties and to the presence of the 'Belgic defence' – dismantled, no doubt, but a considerable barrier until its obliteration in the middle of the 2nd century.

For the first half-mile from Calleva there are no visible traces of the road; a hedge is built near the line. A minor road over the Reading and Basingstoke Railway is however on the course, and a mile further on a hollow way, Park Lane, begins and carries the line within a few hundred yards of Stratfield Saye Park. This lane is at present easily passable on foot, but somewhat overgrown and also very muddy at most times of year: it lies on the clay. The *agger* makes its first unmistakable appearance in the Park, and can be seen at one field's width from the lane skirting the north side of the Park; some fine oaks, the relic of a hedge, grow upon it. Lane and road converge near the R. Loddon (which the latter must have crossed by a ford) and two Roman pots, one in Reading Museum and the other at Stratfield Saye House, have been dredged up near by. Then the lane takes up the course as far as the alignment-point at Park Corner. From here there is a very extensive view towards Finchampstead and the next alignment-point, and but for the trees fringing the Park the site of the East Gate of Calleva would be readily visible in the other direction. From Silchester the serrated crest of the famous avenue of Wellingtonias near the Wellington Monument, about half a mile south of Park Corner, can be seen on the skyline.

Between Park Corner and the R. Blackwater, the course of the road is marked by an extremely pleasant green lane, with traces of the *agger* here and there, which leaves the Reading–Odiham road near Riseley recreation-room. The present deep ford over the river probably marks the site of the Roman ford. Near this point a gold *solidus* of Constantius II (324–361) was picked up in 1944: it bears a facing bust of the emperor, with spear and shield, and the reverse side commemorates his thirtieth jubilee, A.D. 354. The coin was minted at Antioch.⁶

We may conveniently leave the Devil's Highway, as this road is sometimes called, at this point. On its next alignment, a milestone was found, uninscribed but probably marking 10 Roman miles to Calleva or 9 English. It is preserved in the garden of a house near by.⁷ Little is known of the structure or, formally, of the date of the road: it must mark the path of Vespasian's westward advance of 44, and was probably built not long afterwards. It is from 24 to 30 feet wide, and on Easthampstead Common is bordered by small side-ditches, 83 feet apart, a distinctive, if rare, characteristic of first-class Roman roads.⁸ The broad swathe of the road-zone thus delimited must have been a most prominent feature hereabouts, and may have given rise to the modern name.

CALLEVA-SPINAE-ISCA SILURUM (SILCHESTER-SPEEN-CAERLEON)

The main road westward from Silchester, traversed by the 13th and 14th *Itinerary* routes, is a continuation of that last described.⁹ Apart from a slight readjustment of course on high ground beyond Aldermaston Soke, it runs on a straight alignment towards the R. Kennet and Thatcham Newtown on the far side, and then slightly changes its direction for Speen. Beyond Speen the road forks, one branch leading to Caerleon via Gloucester and the Forest of Dean, and the other to the same destination via Bath and a ferry over the Severn. The road begins, as field-work in 1956 proved, at the west entrance of the 'Belgic defence', and its course is represented at first by a hedgerow. The hump of the *agger* as it crosses the Silchester-Reading road is the first visible sign of it, but further on in the plantations between the Reading road and the Silchester-Aldermaston road its course is well marked - first by a deep hollow way, and then by a well-preserved stretch of the *agger* which can be seen from a ride (which actually crosses it), leaving the Aldermaston road at the top of the hill, near a pair of cottages on the east side. A curious bend in the road at the bottom of the dip, at Aldermaston Soke, shows how later traffic sought to make use of the metalled causeway at this marshy point; but the modern road soon leaves the old alignment, which runs straight on into the grounds of Aldermaston Research Station at Little Heath plantation. A fine stretch of Grim's Bank (p. 81) can be observed here to the north-west of the Roman road, running towards Padworth

Common: it is accessible on the north-west of the Research Station enclosure.

The road crossed the Kennet by a timber bridge. Saxon charters are a rich source of material for the study of Roman roads, as these were so often used as boundaries; and in the bounds of Brimpton parish (944) there is mention of a *weala bruce* (Bridge of the Welshmen, i.e. Roman-Britons) over the river at a spot now known as Quaking Bridge, no doubt because of the lack of attention its structure received in mediaeval days.¹⁰ At Thatcham Newtown a roadside settlement has been found, and among many Roman remains from it may be mentioned a set of late 4th-century pewter dishes found in a well.¹¹ Thatcham Newtown has produced more Roman remains than Speen, and some attempt has therefore been made to show that this was the *Spinæ* of the *Antonine Itinerary*. It is difficult, however, to reconcile the *Itinerary* mileages, however corrupt, with this suggestion.

The line of the road as described was discovered by Dr O. G. S. Crawford in 1914; it was previously thought that it followed the parish and county boundary, but no trace of a Roman road was ever found on this route, although a British track may have followed it and remained in use until post-Roman times. O'Neil suggested that the Greenham Common earthworks lay astride it (*cf.* p. 82). The chief reason for suggesting that the Roman road ran on this line is probably the existence of an ancient boundary-mark called the Imp Stone, lying a mile west of Calleva on the edge of Silchester Common, where the parishes of Silchester, Pamber, Aldermaston and Mortimer West End meet. The stone protrudes about a foot from the ground, and is the subject of several local legends — that it was hurled by the Giant Onion from Calleva, that it turns round on the stroke of midnight, or that it cannot be dug up. It was in fact dug up during the Society of Antiquaries' excavations, and scrubbed to see whether it bore any inscription such as the beginning of an imperial title IMP—, which might have given rise to the name. It was considered that the Imp Stone was a Roman milestone *in situ*, which is now known not to be the case, and the suggestion that it was a milestone inscribed IMP— from the true Roman road to the north is also ruled out by the fact that in 1280 the stone is mentioned as the *hyneston*.¹² The name Imp Stone can only be a later version of this, rationalized with the legend.

Reference was made in Chapter 6 to ribbon-development along the line of this road immediately west of Calleva, and in 1956 the road itself was examined. It was about 20 feet wide, and only a foot thick, made of compacted gravel with an intensely hard surface bruised by the comminuted grit produced by wheeled traffic. The section showed pot-holes, repaired, and replacement of the original surface by a new one when it had become too worn for further patching.

CALLEVA-SORBIODUNUM (SILCHESTER-OLD SARUM)

This road,¹³ known as the Portway, left Calleva by the South-West Gate and follows a fairly direct line to the top of the Downs at Freemantle Park Farm, one of King John's lodges, $7\frac{1}{2}$ miles from Silchester. There another alignment begins. It is followed in part by the 15th *Itinerary* route, which diverges from it at *Vindomis* (St Mary Bourne) to run by way of Winchester.¹⁴

As with the Roman road from London, considerations of terrain prevented the alignment of this road directly upon the relevant entrance in the 'Belgic defence' – in this case, the west; it runs from the north-west corner of Rampier Copse, about 200 yards to the south, on a straight alignment to Freemantle.¹⁵ The sudden marshy declivity enclosed by the Outer Earthwork west of the Roman town was thus avoided, and the short stretch from Rampier Copse to the South-West Gate was no doubt chosen after the obliteration of the 'Belgic defence' in preference to a slightly longer line via the West Gate proper.

According to Colonel J. B. P. Karslake,¹⁶ the road was 30 feet wide at the corner of Rampier Copse, and obliterated the Outer Earthwork. It overlay a road only 10 feet wide at this point, which he considered to be pre-Roman, but which is much more likely to have been an earlier version of the same Roman road, constricted for its passage through a gateway in the Outer Earthwork, and later extensively re-metalled when this defence became obsolete. The course of the road then leads through the ruins of a barn at the bottom of the slope and across the brook, where traces of its gravel causeway have been seen. On the far side, a faint hollow way can be discerned and further on a few yards of the Silchester-Basingstoke road are founded upon the Roman highway. There is a pond on the north of the road at this point, probably formed by the

embankment of the *agger*. Near by, on the west, is the defensive earthwork known as the Flex Ditch. The road descends into Pamber Forest by a hollow way and has occasioned a prominent ridge or dam across the valley near Beggars Bridge Green. Traces of the road can be seen in the forest, but the first well-preserved remains of the *agger* are to be discerned only on the far side, beyond the Tadley-Basingstoke road. From Honey Mill Bridge to Skate's Farm there is a good stretch, and beyond the farm the road brought about a prominent crop-mark in the dry summer of 1955. Somewhere near by, or a little further on, one of the Saxon charters refers to a *mil-gemet* or milestone, now vanished, perhaps the fourth from Silchester.¹⁷ This is a convenient place to leave the Roman road; but the journey to the top of the Downs is rewarding for the sake of the extensive view of its course onward towards Old Sarum.¹⁸

CALLEVA-VENTA BELGARUM (SILCHESTER-WINCHESTER)

This road¹⁹ is traversed by another part of the 7th *Itinerary* route, which led from Chichester via Bitterne (near Southampton) to Silchester and London. Here again, unsuitable ground in the immediate vicinity of Calleva made a direct alignment upon the relevant entrance of the 'Belgic defence' – in this case the south – impossible. South of the town there is an extremely soft and marshy patch which was carefully avoided by the builders of the Outer Earthwork, and the road begins to the east of this. The main north-south street of Calleva is carried beyond the South Gate to the 'Belgic' entrance and is then deflected to meet the road; this short, angled length is prominent on aerial photographs and can sometimes be seen on the ground, usually marked by a growth of common dock. It aims for the first of a number of small maple trees on the roadside north-east of Church Lane Copse. The south entrance of the Outer Earthwork, and the alignment point of the Roman road, appear to lie a few yards on the far side of Church Lane. From here the road runs almost straight to the top of the Downs west of Basingstoke, a convenient point to indicate its course being the tall, castle-like building near the crest of the Downs – in fact a part of Park Prewett Hospital: one of the rare cases where Edwardian gothic camouflage achieves its purpose.

It has been generally suggested that the Roman road is represented by Church Lane as far as Three Ashes, and that there its line was slightly re-adjusted to carry it through Latchmore Green (where it has been found). There is very little to recommend this suggestion, although Church Lane must preserve the approximate line; and after the discovery of the alignment-point at Silchester in 1956, a couple of hours' field-work proved that the road ran straight to Latchmore Green. The traces observed consist of various kinks in the hedgerows, a particularly noticeable example lying to the west of the modern road north of Silchester Brook. A few feet of the *agger* are preserved at this point. The hump in Church Lane, where the road passes beneath, is also noticeable near the north end of Church Lane Copse, and there are significant deviations of the roadside hedge on either side of it.

At Haines Farm remains of a Roman building have been discovered, with occupation-material of the 3rd century.²⁰ The road has been found several times and sectioned once at Latchmore Green. It was cambered and 20 feet wide with a foundation of flints set in clay upon gravel. Its eastern edge lay $88\frac{1}{2}$ feet west of the crown of the modern road.

Traces of the *agger* are visible just west of Latchmore Green Farm, and further on at Peat Gulley Copse a green lane carries on the line. A stretch of the *agger* then begins which continues through Morgaston Wood in the direction of Sherborne St John: it is particularly well preserved on the south side of the wood, and was clearly in use as road or track in mediaeval times, for there is a ditched enclosure a little south of the wood which has yielded pottery of that period.

At Sherborne St John, Roman remains indicating scattered settlement have been found. Past the village, the course of the road is marked by the modern highway for about half a mile, and then by hedgerows to the grounds of Park Prewett, where the *agger* is visible, and in 1913 was observed to be 28 feet wide. As it meets the Basingstoke-Kingsclere road it is 2 or 3 feet high and is made of chalk. On the far side of the modern road it continues by way of a narrow lane towards its main re-alignment point north-west of Kempshott House. Here we may leave it.

This road is almost certainly of very early date; Mr F. Cottrill, F.S.A., found a piece of Samian not later than the reign of Nero (54-68) beneath it, a short distance beyond the north gate of *Venta*

Belgarum.²¹ The route provided a useful connexion with the south coast at Bitterne (*Clausentum*), and it may have existed in some form or other before the Roman conquest. It has been suggested that some of the Arretine and Gallo-Belgic wares found at Calleva may have come from a south-coast emporium and not via the Thames.²²

CALLEVA-REGNUM (SILCHESTER-CHICHESTER)

This road is ignored by the *Antonine Itinerary* and has only recently yielded the secrets of its course to field-work undertaken by Ordnance Survey officers, to whom the writer is indebted for the following details. The road leaves that last described at Haines Farm – the fork adds extra reason for the building (perhaps a way-side inn) there – and runs perfectly straight for 12 miles to Honeybourne Down, which is visible from Silchester. Since the road is not aligned upon Calleva itself, in its final form at least it may not be so early as some of the other roads; on the other hand, it may date from the early days of the province when King Cogidubnus of the Regnenses held sway over the area (p. 63).

Near Calleva, the usual trail of hedgerows, embanked ponds, and lengths of modern road take the Roman line to the immediate west of Bramley, across the Bow Brook where the *agger* causes a striking Z-bend, along the boundary between the parishes of Bramley and Sherborne St John, and through Cufaude.

This road is especially interesting inasmuch as at Woolmer Common, close to its line 7 miles beyond Honeybourne Down, the enormous hoard of over 29,000 *antoniniani* ending with Carausius and Allectus (p. 77) was found in 1873 – the Blackmoor Hoard.²³

CALLEVA-VERULAMIUM (SILCHESTER-ST ALBANS)

This road is also ignored by the *Itinerary*, and indeed the greater part of its course has yet to be ascertained. Enough survives at both the Silchester and St Albans ends to prove that it existed, and suggest that it ran via one re-alignment to the Thames at Cookham, where 'pile-dwellings' (? merely piles of a bridge) were found many years ago.²⁴

This road leaves the Devil's Highway about $3\frac{1}{2}$ miles from Calleva, not far from the end of the sunken lane mentioned in our

exploration of the Silchester-London road (p. 202). From Fair Cross a short length of modern road gives the line, which is then taken up by a pleasant green lane leading to the high ground at Beech Hill. The same alignment is then continued towards Stanbury Court, Spencers Wood, where there must have been a deflection of the course towards the north-east. The road probably ran about a mile to the north of the R. Loddon, crossed the river at Earley, and passed through the parishes of Ruscombe and Waltham St Lawrence, in both of which Roman remains have been found.

The map reveals more than one suggestion of the precise course followed by this road, and field-work would no doubt substantiate it.

CALLEVA-TAMESIS-ALAUNA

(SILCHESTER-DORCHESTER-ALCHESTER)

Although this,²⁵ the last of our seven roads, led ultimately to the Watling Street at Towcester (*Lactodorum*) and provided thus a useful cross-country route between the south coast and the Midlands via Calleva and *Venta Belgarum*, it has escaped mention in ancient accounts except the *Cosmography of Ravenna*,²⁶ whence the names *Tamesis* and *Alauna* are taken.

The road leaves the North Gate of Calleva – probably in fact the north entrance of the ‘Belgic defence’ just within the North Gate – on an almost direct course for the Kennet at Sulhampstead. It traverses the area of the town cemetery and runs down the slope, over the West End Brook, and so up to West End Farm, the approach-road of which is on the alignment. Traces have been observed between Silchester and this point, but they are not impressive. At the brook, there are ridges on both north and south, leading up to hollow ways. The course between West End Farm and Ufton Nervet is difficult to follow, for it lies almost wholly in plantations and is obscured by heather and bracken where the young firs have been cut. From the north side of the Aldermaston-Mortimer road, opposite West End Farm, a boundary-bank continues the line down into the valley of Pottinger’s Furze; the road then mounts a declivity on the far side and gains the level heathland enclosed as Hundred Acre Piece. In 1956 this was too overgrown to enable the writer to verify the traces of the road noted by others. Under the fir-trees fringing the Mortimer-Padworth road,

however, the *agger* is distinct, and can be seen about 85 yards west of the junction of this road with the road from Ufton Nervet. The *agger* is flanked by boundary-ditches 62 feet apart – the mark of a secondary Roman road just as the 83-foot swathe is characteristic of a first-class highway (p. 203). North of this belt of firs the *agger* fades away, and few traces have been discovered of the further course of the road to Ufton Nervet and beyond. There is a slight alteration of course south of Pond Slade, and the earthwork mentioned in Chapter 3 (p. 81), Grim's Bank, impinges upon it a little north of this point, and may in fact be elaborated for defensive purposes here. Almost all remains have gone for a distance of 9 miles between Ufton Nervet and Streatley. From Streatley to Dorchester and Alchester the road is well authenticated, and Saxon charters have again played their part in determining its line.

The omission of this route from the *Antonine Itinerary* is the more surprising because there appears to have been a government officer at Dorchester for the collection of corn-dues:²⁷ then, as now, this region was mainly devoted to the production of grain.

TRANSPORT

From the point of view of survival, carts, waggons and carriages suffer from the same disability as Roman furniture. So much was made of wood that to identify all the surviving metal pieces would call for a lifetime's experience as a country blacksmith. The Collection however contains two tires, some hub-bands and hub-linings, a variety of linch-pins, and one or two iron sheaths for cart-poles, and there is also the curious bronze attachment described below. Horse-furnishings are represented by snaffle-bits, a cast bronze bridle cheek-piece with enamel inlay, harness-rings, and temporary iron shoes – 'hipposandals' – which were tied over horses' feet when they were worked on metallated highways. There are no definitely Roman or Belgic horse-shoes (proper) from our site, although one or two fragments may be of the light Roman type noted elsewhere. Oxen were also widely used as draught animals, and the Collection contains shoes and goad-tips.

The iron tires²⁸ are 43 inches in diameter and 1 inch thick, and as they have no nail-holes were evidently shrunk on to the felloes in the same way as now. The tires are only 1½ inches wide, however, and it is doubtful whether they came from a light carriage or

trap, or whether more than one were affixed to a wide cart-wheel. They were found in a pit in *Insula xvi*.

Several varieties of linch-pin have been found; they are mostly of iron, and take the form of a square shank with a crescentic head to which a safety-loop is attached. Only one, an unusually light specimen found under one of the town-streets in 1955, has a slot at the opposite end, in the modern fashion.²⁹ A large and heavy linch-pin found with the 1900 hoard of ironwork terminates in a right-angled extension above the crescentic head, probably intended as a step for convenience in mounting the vehicle (Fig. 36, p. 185).³⁰

The bronze object³¹ is just over 3 inches high and consists of an octagonal socket ending in an eagle's head which springs from a rudely-modelled acanthus-moulding. A swan's head rises from the base of the socket like a hook. This type of object is not uncommon in Britain and on the Continent, and can be explained by discoveries in Hungary as the ornamental terminal from a stout iron bracket affixed to the axle-beam on either side of the body of the carriage, to stabilize the body and prevent it slipping sideways.³²

Conclusion

*Quid Romam in media quaeris novus advena Roma
Et Romae in Roma nil reperis media?*

GIANO VITALE (D. c. 1560)

The tale of ancient Silchester is now told – told, that is, within the limits of the information available to us. A fairly detailed account has been given of the evidence relating to the Belgic settlement, for this has been one of the writer's main interests. The Roman town, too, has been accorded adequate historical treatment, and the subsequent chapters have dealt with most aspects of Callevan life. Chapter 9 has been added in the hope that visitors to the site will be encouraged to seek the traces of the Roman roads near by for themselves – one of the most fascinating parts of archaeological field-work.

As a whole, of course, the story is very sketchy. No other Roman-British town has been so extensively explored, but it is incorrect to say (as is often said) that Calleva has been completely excavated. Indeed, this is far from the truth. The aerial discovery of buildings not found in the old excavations emphasizes this fact, and perhaps the most vivid corroboration was revealed by the 1955 cutting over the 'Belgic defence'. The trench was over 140 feet long, and situated in part of the town explored in 1900. Not a single trench of that season's work was encountered, and so it may be that the blank spaces on the 1908 plan represent areas where no digging was done just as well as areas where digging revealed nothing. Moreover, even where the plan shows structures fairly close together, there remains the undug ground between the trenches which, although it cannot hide large or imposing buildings, must preserve numerous smaller ones – especially of timber – and such things as pits and wells. Joyce's great Forum spoil-mounds were not cleared away until the last phases of the Society of Antiquaries' excavations, and there is thus an area of about

4,000 square feet quite untouched in this vital part of the town. Excavation in these places, coupled with a programme of selective re-examination of buildings uncovered in the old days, should ultimately be able to furnish us with a chronology of Calleva as complete as the plan to which it is a necessary concomitant. Progress has already been made with the Belgic and earlier Roman periods; but our knowledge of later Roman times is very poor. The skeleton is as yet disarticulate. To join its many parts must entail many years' work. It is not inappropriate, perhaps, that a book on Silchester should appear now, as a guide to past discoveries and a foreshadowing of future developments; in *Roman Silchester*, the manifold problems of the site have been clearly posed, at least, and also the means for their solution.

Knowing that the town-site is scheduled under the Ancient Monuments Acts, the visitor is sometimes disappointed at finding no buildings at all open to view within the Wall. The reason why none was left exposed has been explained in Chapter 1. Perhaps one day circumstances may change, but it would be idle to pretend that this time is at hand: the cost of conservation was enormous in the eighteen-nineties and, except on the smallest scale, is out of the question now. But the Wall is there, and all the surface traces mentioned in this book; and few who have stood within the ancient circuit can fail to experience a sense of continuity with the past—perhaps all the more readily evoked by a site like Silchester than by one which needs complete clearance by the spade.



Access to the Site

Silchester is one of the less accessible sites of Roman Britain. Even Stukeley wrote 'many were the *roman* roads that met here, tho' now scarce any road, which is the reason 'tis so little known' – and if matters have changed greatly since 1724, many still are the hopeful visitors who successfully reach the environs of Calleva but utterly fail to gain admittance. There is no highway over the site: a public footpath called 'The Drove' leads from the churchyard westward to join a road at the side of Silchester Common. The Drove is the only means of access to the interior of Calleva, but permission can be obtained to visit all the spots mentioned in *Roman Silchester* when they are not to be seen from Wall Lane, Church Lane, The Drove, or the various footpaths marked on the Ordnance Map.

The Calleva Museum is a small building in the Rectory grounds where The Drove joins the Common. It contains objects illustrating life in the town, models, photographs, and maps, in general epitomizing the main Collection at Reading.

There is an hourly bus service from Reading to Silchester, and on Wednesdays and Saturdays a bus runs from Newbury via Silchester to Basingstoke. The nearest stations are Mortimer and Bramley on the Reading and Basingstoke Railway; from Mortimer there is a charming walk to Calleva along Pitfield Lane – not recommended in wet weather, however – which emerges by the Amphitheatre.

Notes

Volumes of *Archaeologia* are indicated by serial number only.

CHAPTER I

1. Cottages were still to be seen near the church until late last century.
2. Connected with the Welsh *celli* = wood (Sir John Rhys).
3. O.E. *sealh* (sallow), **riele*, **sele*; Ekwall, *Dict. Eng. P. N.* (1947), p. 402. Bradley's derivation, quoted by Grundy, *Archaeological Journal*, LXXXIV, p. 231, *Syl-chester* (= Column Chester) is not to be preferred. The name is *Silcestra* in Domesday Book, and occurs as *Sicestria*, *Cilcestra* in Geoffrey of Monmouth, see note 7 below.
4. *Itinerarium Curiosum* (1724), p. 169ff., Pl. 61; and ed. (1776), Pl. 43.
5. Sir T. Duffus Hardy, *A Description of the Patent Rolls* (1835), see Appendix under 19th May, 1215.
6. Tour, Everyman edition (1908), pp. 50-1.
7. *Historia Regum Britanniae, in Rerum Brit. Scriptores* (Heidelberg, 1587), VI, 5, IX, 1. Everyman edition (1912), pp. 98, 135.
8. These objects are described in pp. 94 and 125.
9. P. 80.
10. Grim = Woden. Stenton, *A.-S. England* (1947), p. 100. Cf. Wansdyke.
11. As Hearne thought (*Collections*, ed. Oxford Historical Society, IV, p. 360 [1714]) this name is probably derived from a misreading of the name *Constantinus* on coins. Camden is the first writer to mention the giant. Unaltered versions of the legends are still sometimes to be elicited from the oldest villagers.
12. Constantine III and Arthur: Geoffrey of Monmouth, *loc. cit.* Bishopric, e.g. Leland, *Itinerary*, ed. Toulmin Smith, V (1908) p. 168, *Mauganus*. Constantius II: Nennius, *Historia Brittonum*, ed. Stevenson (1838), xxv; transl., Giles, *Six O.E. Chronicles* (1872), p. 394. In any case this story does not refer to Silchester. But see *The Emergence of England and Wales*, A. W. Wade-Evans, (Wetteren, 1956), pp. 121-2, suggesting that the Constantine mentioned by Nennius was a son of Magnus Maximus (383-388).
13. *Itinerary*, ed. Toulmin Smith, viii (1909), p. 110.
14. Corn grows more thinly over the lines of streets and other foundations, and ripens earlier, owing to the relative lack of moisture. Conversely, where corn is sown over buried ditches etc., the growth is more lush owing to the relative abundance of moisture and humic matter in the fillings. In both cases marks result which can be observed from the ground, or, with better effect, from the less oblique angle of view given by an aeroplane. Many famous sites have been discovered in this way, when the surface relief of their defences etc. was negligible.
15. P. 134 (= p. 126 of Gibson's English edition of 1695).
16. *Loc. cit.*
17. *Loc. cit.*
18. *Loc. cit.*
19. *Phil. Trans.*, 1748, p. 603.
20. *Ancient Wilts*, II (1819), the Roman *Æra*, p. 51ff.
21. *Monumenta Britannica*, MS. Bodl. Top. Gen. C. 24, f. 214, 215.
22. Hearne, *Collections*, viii, p. 265.
23. *Op. cit.*, xi, p. 383; *Fancies*, VIII, p. 383.
24. Camden, *loc. cit.*
25. *Itin. Curios.* (1724) p. 170.

26. Materials: Collet letters, B.M.Add.MSS., 6181, ff. 7, 9, 11, 13; 6210, ff. 29, 30; 6211, f. 142; 6212, f. 26; (Ward's reply) 6226, f. 93. Plans and drawings, B.M.K. Top. XIV, 85a-d; Wright's plan, 85c. See also Gough's *Tours* I, MS. Bodl. Top. Gen. E. 16, f. 162 (1768). See also, *Hampshire Allegations for Marriage Licences*, (Harleian Society), II (1893) p. 238. Stair has sometimes been confused with his son of the same name, who was a schoolmaster and died in 1820 (as in anon. *Guide to Silchester*, Basingstoke, 1823, p. 7). Thomson, *The Book of Silchester* (1924), I, p. 257 is confused.

27. Published, *Phil. Trans.* 1744, p. 201.

28. B.M.Add.MS. 6212, f. 26.

29. *Arch. Journ.* VIII, Pl. p. 227.

30. K. Top. XIV, 85c.

31. Add MS. 6210, f. 29.

32. Reissued by the Hampshire Field Club in 1933, to a slightly reduced size.

33. P. 457.

34. The *Antonine Itinerary*, ed. Parthey and Pinder, Berlin, 1848; in *Itineraria Romana*, ed. Cuntz (1929). The work consists of lists of routes between principal places throughout the R. Empire. Between the termini intermediate places are given, as in the 14th British route:

Item, alio itinere ab Isca Calleva m p m (milia plus minus) ciii [sic]

Venta Silurum	viii
Abone	xiii
Traiectus	viii
Aquis Solis	vi
Verlucione	xv
Cunetione	xx
Spinis	xv
Calleva	xv

i.e.

Item, by another route, Caerleon-Silchester, approximate mileage 103:

Caerwent	9	
Sea Mills	14	(<i>Traiectus</i> means a crossing: it may apply to Sea Mills,
Bitton	9	there being a name fallen out between <i>Abone</i> and
Bath	6	<i>Aquis Solis</i>)
Sandy Lane	15	
Mildenhall	20	
Speen	15	
Silchester	15	

The places mentioned in the *Itinerary* are *mansiones*, posting-houses, and not merely where mounts could be changed (*mutationes*). The later *Itinerary from Bordeaux to Jerusalem* inserts these. This fact and the roundabout routes sometimes specified suggest an official purpose for the document, i.e. in connexion with the collection or distribution of the *annonae*, the corn-tax. See D. van Berchem, *Mém. Soc. Ant. de France*, 1936. As we have it, the *Itinerary* is of late 3rd- or early 4th-century date.

35. *Collections*, VI, p. 178; VII, p. 350.

36. See T. Codrington's interesting remarks on the means available to Horsley and his contemporaries for deciding the sites of Roman places: *Roman Roads in Britain* (1918), p. 32.

37. *Vindomis*: Haverfield, *V.C.H. Hants.* I (1900) p. 321.

38. LXI, p. 215-8, etc.; p. 76.

39. See Haverfield-Macdonald, *The R. Occupation of Britain* (1924), p. 289ff.

40. *De Bello Gallico*, V, 21.

41. *V.C.H. Hants.* I (1900) p. 280.

42. XXVII, p. 418 *et alibi*.

43. *Journal*, introductory pages.
44. L, p. 264.
45. XL and XLVI, partly posthumous.
46. L, p. 264.
47. XLVI, p. 332ff.
48. *Journal*, sub 7th November, 1872.
49. Sub date.
50. *Ibid.*
51. P. 201ff. of 1st (1881) ed.
52. *Proc. Soc. Ant. Lond.*,² XIII, p. 85ff. For the information which follows, I have drawn upon the recollections of Mr Maurice St John Hope, Mr Fred Smith, and others, and upon chance MSS. and printed records, as the summary annual reports of the S.E.C.; refs. in the full annual reports, LII-LXII; *VCH Hants.* I, p. 275f., etc.
53. LXI, p. 474.
54. *Antiquity*, 1950, p. 124; cf. *Archaeology from the Earth* (1954), p. 127.
55. LIX, p. 341ff.
56. As it did: see Hawkes, *Archaeological Journal*, CIV (1947) p. 27ff.
57. LXI, p. 210.
58. May, *op. cit.*; Pearce, *Nim. Chron.* 1929, p. 328ff.
59. LXI, p. 485.
60. MS. records in Reading Museum. His published work on the Outer Earthwork, LXII, p. 330ff., *Proc. Hants. F.C.*, VII, p. 43f.
61. XCII, p. 121ff.
62. Discussed fully in the next chapter.
63. Coins; bronzes, including the Eagle found in the Basilica, 1866; three mosaics and some other objects.
64. The arrangements are described in the Reading Museum archives; see also *Guide to the Silchester Collection* (last ed. 1927), p. 8.

CHAPTER 2

1. *V.C.H. Hants.* I (1900), p. 275.
2. See pp. 76-7.
3. XCIII, p. 1ff.
4. Chapter 1, note 34.
5. Ed. Muller (Paris, 1883), I, i, p. 102 (= II, iii). For a map based on Ptolemy's co-ordinates, see Ordnance Survey *Map of Roman Britain*, 3rd ed. 1956, text p. 20. Ptolemy flourished in the middle of the 2nd century.
6. In contrast to what they themselves told Caesar (*B.G.* II, 4): see Radford, *Proc. Prehist. Soc.* 1954, p. 2ff.
7. *B.G.* IV, 21.
8. Story in *B.G.* VII-VIII, trans. Handford, Penguin Books (1951), p. 179ff.
9. *Stratagemata*, II, 13, 11.
10. The reader should observe that this theory represents the writer's opinion, which he intends to expand elsewhere in a more suitable place. It has otherwise been suggested that there was no Atrebatian penetration before the landing of Commius, which resulted in a gradual thrust northward. See especially Hawkes and Dunning, 'The Belgae of Gaul and Britain', *Arch. Journ.* LXXXVII, p. 150ff. for a general account of the Belgae and their settlements in Britain; take with *Antiq. Journ.* XII, p. 27ff. and 411 ff.; Allen, 'The Belgic Dynasties of Britain and their

Coins', *Archaeologia* XC, p. 1ff.; Radford, *loc. cit.*; and other papers, notably *Proc. Hants. Field Club* XII, p. 99ff.; XIII, p. 208ff. Distribution maps: cf. Mack's figs. pp. 28, 32, 54.

11. Or about half as heavy again as an English half-sovereign; the metal however was not so pure and became worse as time went on. As is well known, the designs of such coins were derived from the stater of Philip II of Macedon (4th cent. B.C.), which had a laurelled bust of Apollo on one side and Victory driving a two-horse chariot on the other. For the best general account of the Ancient British coins, see Allen, *op. cit.*, and for the uninscribed, Mack, *The Coinage of Ancient Britain* (1953). The first extensive work on the subject, still much used, is Evans, *The Coins of the Ancient Britons* (1864) and *Supplement* (1890). The present coin is as Mack 58, etc.
12. *B.G.* IV, 21. He was, in point of fact, thrown into chains upon arrival, and it may be that he had but a vague notion of where the people acknowledging his authority were to be found. Other Gaulish chiefs claimed authority on both sides of the Channel, e.g. Diviciacus, *B.G.* II, 4.
13. Mack, 92. The gradual reduction in weight from 90 to 82 grains can be observed in the uninscribed coins.
14. Hawkes and Dunning, *op. cit.*
15. Radford, *loc. cit.* p. 2f.
16. Excavated by Sir Mortimer Wheeler, *Vesulanium Report* (1936), p. 16ff., and considered to be the *oppidum* of Cassivellaunus sacked by Caesar in 54 B.C.
17. Mack, *op. cit.*, p. 30; *Sussex Arch. Coll.* XXIX, p. 81, etc. Heron-Allen, *Selsey Bill* (1911), plates 49, 50, illustrates some specimens.
18. See works cited, note 10.
19. In Hampshire, for example, their settlements have been found at St Catherine's Hill, Winchester (*Proc. Hants. F.C.*, XI), Worthy Down (*ib.* X, p. 178ff.), Twyford Down (*ib.* XIII, p. 188ff.) and elsewhere.
20. Nevertheless, the striking concentration of inscribed coins of all four monarchs in the south suggests that this was the only part strongly colonized, and that rule of the northern territories may have been both tardy and ineffective. In respect of the foundation of Calleva, it would be interesting to excavate at Bullsdown Camp, Sherfield-upon-Loddon, only 3 miles S.E. of Silchester, which was presumably held by the native Britons until a late date.
21. Radford, *loc. cit.*, p. 8.
22. Mack, 92-132.
23. *Dio Cassius* LX, 19.
24. *Monumentum Ancyranum*, ed. Hardy (1923), p. 145.
25. Mack, 105.
26. There is a fascinating article on the political affairs of the Belgae by Stevens, in *Aspects of Archaeology in Britain and Beyond, Essays Presented to O. G. S. Crawford* (1951), p. 332ff.; cf. note 28. For the parallel of Augustus I am indebted to a suggestion by Mr F. R. D. Needham, M.A., F.S.A.
27. The pre-Belgic objects from the site are very few, and the total absence of pottery makes it plain that there was no occupation. Iron Age remains comprise a La Tène I brooch (in private hands) and a Late Hallstatt or La Tène bead (Fig. 16, p. 111 of the present work).

Of earlier remains there are also two Neolithic flint implements - a polished axe and a flaked lance-head. A Late Bronze Age sword has also been found (now at Stratfield Saye).

From somewhere in the parish come another Neolithic polished (chert) axe (J. S. Eytton Coll., Silchester) and a Middle Bronze Age flanged axe. Other flanged axes/palstaves have been found at Stratfield Turgis and Pamber.

A group of barrows on Mortimer Common and sundry Iron Age entrenchments in the district - by far the most important being Bullsdown - point to some kind of scattered occupation of the area in the Bronze and Iron Ages, but it would

not appear to have been very dense. A good deal of work needs to be done in the district, however, and this might colour the picture differently.

Unless otherwise mentioned the objects are in Reading Museum.

28. The style of many is so perfectly Roman as to suggest that the die-sinkers were in fact Roman, and we are brought close to a phenomenon of our own times – the presence of foreign 'advisers' to a native government. With this parallel in mind, we should no doubt err if we assumed that Roman aid was confined to mint-practice!
29. Mack, 97. The only two with provenances, Selsey and Bognor.
30. Mack, 107–8. The nearest to Silchester, Wallingford.
31. P. 26.
32. Rampier Copse has probably been left to itself since Roman times. Relapse of cleared or cultivated ground is fairly rapid: cf. *Guide to the Experimental Farms, Rothamsted*, Herts (1950) p. 21 – Broadbalk Wilderness, left to itself in part since 1882.
33. XCII, p. 137ff.
34. Still in its original bags, unwashed, at Reading Museum when found by the writer.
35. The following information is from the writer's excavations on behalf of Reading Museum (1954) and the Silchester Excavation Committee (1955). The defence had been seen and photographed before the date mentioned, e.g. by Major Allen before the War, but the marks were weak and could not be interpreted in consequence.
36. By permission of the owner of Rye House; the Wall forms the garden-boundary at this point.
37. LVII, p. 99, pl. ix; LVIII, p. 28, pl. ii.
38. Conducted by Mr Humphrey Case, F.S.A., of the Ashmolean Museum, Oxford.
39. In the possession of the Ordnance Survey Archaeological Department.
40. Besides these inward kinks, the actual termination of the defence for the entrance-causway is noticeable, in part, at all four points, and is particularly visible in the case of the east entrance, where the Roman street stands quite clear of it.
41. *Antiq. Journ.* XXI, p. 267f.
42. B.G. II, 12, a place not insignificantly called *Noviodunum*.
43. XC, p. 127ff.
44. The abortive attempt of Gaius (Suetonius, *Caligula*, 44, 46) fell in this year.
45. Allen, *op. cit.*, p. 24f.
46. *Ibid.*
47. *Antiq. Journ.* XXXIV, p. 68ff., pl. XVI.
48. Cited, *ibid.*; note particularly the *Camulodunum* discoveries (*Report*, 1947, p. 129ff.) The Bagendon and Verulamium examples were found afterwards. (Verulamium, *Illus. London News*, 19 Jan. 1957, pp. 106–8, Fig. 14.)
49. LVII, p. 113ff.; cf. LIV, pp. 445f., 454.
50. *Report* (1915) p. 72ff.
51. *Antiq. Journ.* XXXIV, p. 70ff. The Dobunnian plated coin no. 13 is after all Atrebatian, and no. 19 is the possible Atrebatian AE coin mentioned in the present text (information from D. F. Allen). A few old records and further coins have been found since the publication of this list by the writer, and notes are to be found in the *Catalogue of the Silchester Collection* vol. I at Reading Museum. Where totals of objects, descriptions etc. differ from published accounts both here and in the case of the pottery described below, this is due (e. & o. e.) to subsequent work on the objects at Reading Museum.
52. *Ibid.* and Sutherland, *Romano-British Imitations of Bronze Coins of Claudius I* (1935) (*Numismatic Notes and Monographs*, 65). Official halves and quarters of the *as* were always uncommon – the Silchester Collection has only one of each. A reversal

- of the state of affairs described in the present text has been occasionally noted in modern times, when hoards of Roman coins have been found and passed into circulation. The most recent case, probably, concerns the discovery by some labourers of a hoard of 20 Roman coins, one bronze, the remainder bad silver, of the period 194-241, at Brockwell (Derbyshire). Cigarettes, beer and tea were bought with them (*Nottingham Evening Post*, October 30th, 1953).
53. *Camulodunum Report* (1947), p. 133ff.; total, 222, some being chance finds from the Sheepen area.
 54. Wheeler, *Rome Beyond the Imperial Frontiers* (1954), p. 148f. etc. A brief outline of Arretine is given in Oswald and Pryce, *An Introduction to the Study of Terra Sigillata* (1920), p. 4ff.
 55. T. May, *The Pottery Found at Silchester* (1916) pl. II, 1-3, p. 8; cf. Dragendorff-Watzinger, *Arretinische Reliefkeramik* (1948), pl. 8, no. 88.
 56. 1: AC in wreath; *Acutus*, perhaps the same potter who later worked in S. Gaul.
2: SEX/ANNI, *Sextus Annius*, Arrezzo, 10 B.C.-A.D. 10.
3: APRON, *Apronius*, perhaps also working later in S. Gaul?
4-8: ATEI, *Ateius*, the letters separate or variously joined.
9: C.N.ATEI, *Cnaeus Ateius* (same).
10: ATEIM *Atei Mahes*.
11: CN ATEI/EVRYALVS.
12: CN ATEI/EVH[ODI].
10-12 are stamps of slave-potters of *Ateius*. This firm began work at Arrezzo about 10 B.C. and later, it appears, opened branches in Gaul.
13: MENA/AVILI, *Mena* (slave of) *Avilius*. Period as *Sex. Annius*.
14: IVCVNDI, *Iucundus*, found at Haltern.
15: PILEMV, *Pilemus*.
16: SILVA, *Silvanus*, who may have later worked in S. Gaul.
17: XANTI, *Xanthus*, a freedman of *Ateius*, working at Arrezzo, Period: Tiberius.
 57. *Camulodunum Report* (1947), p. 174ff.
 58. T. May, *op. cit.*, pl. II, 5; Oswald and Pryce, *op. cit.*, pl. XXVI, 3. *Vitius* was originally a potter working for *Naeuius* of Pozzuoli.
 59. The best short account of these wares is in *Camulodunum Report* (1947) p. 202ff.
 60. 1: ACVT, *Acutus* (not, of course, the Arretine/S. Gaulish potter).
2: ANO[
3: AMITIO? (or NAMANTO).
4: BITV[, *Bituanus*.
5: BITVOL, *Bituolus*, terra rubra.
6: BITO[
7: BOVTI, *Boutus*.
8: GANIC, *Ganicus*.
9: CARV[
10: COMVS, *Comus*.
11: INDVTIOS, *Indutius*.
12: MAROSI, *Marosus*, terra rubra.
13: MOSSI, *Mossus*.
14: INIXIV, *Inixius* or illiterate.
15: SOVRINI, *Soorinus*.
16: TAOR.
17: VIO, *Violus*?
All except nos. 5 and 12 are on terra nigra.
 61. Others are to be seen near Culham's Farm (Flex Ditch) and on either side of the Silchester-Little London road, in Gravel Pit Copse and Bridle Copse, both to the south-west of Calleva. The Silchester dykes are mentioned by Williams-Freeman, *Field Archaeology as illustr. by Hampshire* (1915) pp. 322, 406. None of them is a Roman road, as has sometimes been suggested. The sub-Roman dykes on Padworth Common etc. are mentioned in Chap. 3 (p. 81).
 62. *Report* (1947), p. 8ff.
 63. *Strabo*, IV, 5, 2; *B.G.*, V, 9.

CHAPTER 3

1. For the most recent general account of the conquest and subsequent history of the island in Roman times, see Richmond, *Roman Britain* (Pelican History of England, 1953).

2. Suetonius, *Div. Vesp.*, 4.
3. Tacitus, *Agricola*, 21 mentions that several 'civitates' were added to the original realm of Cogidubnus. These would surely have comprised the territory formerly belonging to the pre-Roman Atrebatian kingdom. The *Regnes* are not known before Roman times: they obtain their name from the kingdom (*Regnum*) of Cogidubnus. This part of Sussex was Atrebatian in pre-Roman times. We do not know if Cogidubnus was related to Verica.
4. One of the subjects which it has not proved possible to work into the general text of this book is literacy. The many references to inscriptions, however, show that the standard must have been quite high: in a centre of Romanization it would not have been otherwise. This standard was probably not general throughout Roman Britain, and rural literacy may have been very slight. (Comparatively few written inscriptions have been found in villas: but, as a discovery at Chew Park villa, Somerset [Turner, *Journal of Roman Studies*, XLVI, p. 115 ff.] reminds us, accounts and other documents must here have been kept on perishable materials; and in these comfortable farmhouses and country seats there would have been little need to scratch one's name on one's cup and bowl, as seems to have happened so often in towns and military sites.) In addition to 19 official inscriptions etc. found at Silchester there are over 50 names scratched on Samian and coarse pottery, 13 remarks scrawled on tiles before they were fired, and sundry other 'graffiti'. This list does not include makers' stamps etc. on manufactured goods. There are also about 150 iron, bronze and bone *styli* for writing on the waxed surfaces of tablets, part of such a tablet (LXII, p. 325) and several portions of Samian inkwells. All this presupposes that literacy at Calleva was very widely prevalent indeed, and had permeated society down to the humblest levels – it is only a certain sort of person who scrawls a smutty remark on a tile or wall-plaster. In fact the existence (a) of meaningless jumbles of letters and (b) what can only be described as imitation-writing shows that illiteracy was shameful. The examples figured e.g. on p. 65 show quite practised hands, especially the last specimen. This is a typical piece of Roman cursive writing, similar to that appearing on Dacian waxed tablets of the 2nd century (see Thompson, *An Introduction to Greek and Latin Palaeography*, 1912 ed. pp. 311, 316; our tile is 1906 ed., p. 211). The Vergilian tag *conticuisse assens* suggests that this example may be a writing-lesson.

Whether Latin – of a sort – was spoken as well as written is another matter. It probably was; but this need not presuppose the disappearance of Celtic speech. As visitors to parts of France and Italy – and of course elsewhere – know, the minority language, e.g. Provençal or Piedmontese – is habitually spoken, but only the official language is written. The children are taught nothing else, and it takes a conscious decision to apply the symbols used for the sounds and words of one language to another, especially if the latter is unprovided with any previous alphabet at all.

5. XCII, p. 121 ff. The writer is indebted to Mrs Cotton for many opportunities of discussing these results and the possibilities which may be built upon them.
6. Another subject which cannot be treated in the text is the Roman coinage. Very briefly, the main outlines are as follows. There were two monetary systems, early and late, with an intermediate phase. The early system was established by Augustus on the wreck of the Republican system. 16 *asses*, 8 *dupondii* and 4 *sestertii* (of copper, brass and brass respectively) went to a silver *denarius*, and 25 *denarii* to the gold coin called an *aureus*. The values of these coins in terms of buying power are almost impossible to assess. As bullion, it is common to take the *denarius* as worth about a shilling, but it should be realized that owing to the gold-silver ratio the *aureus* would be grossly undervalued in terms of modern currency by this means. It is only very slightly less than an English sovereign in weight. The precious metals were issued by the Emperor's mint, the 'Aes' token coinage by the authority of the Senate of Rome, and in consequence it bears (in general) the letters S C (*Senatus-Consulto*). These arrangements held good until the 3rd century, but during this time there was a growing debasement of the silver coinage, and a *denarius* of Severus was worth less than half a *denarius* of Augustus.

In the early 3rd century Caracalla introduced a new coin which we call an *antoninianus*, worth about $1\frac{1}{2}$ contemporary *denarii* but (it seems) tariffed at 2. After a false start it succeeded in driving out the *denarius* and in the troubled times of the 3rd century gradually supplanted almost all other coins in general circulation. It was progressively debased until, in the time of Gallienus' sole reign (260-8), it was nothing but a copper piece with an infinitesimal silver content, washed over with silver or white-metal to improve its appearance. The economy of course collapsed. It was no longer worth issuing the large token coins and their emissions were discontinued. Several attempts were made to improve the coinage in the later 3rd century but Diocletian's was the most successful. A large bronze piece which we call a *foliis*, subdivisions of it, and gold and silver were now issued in suitable quantities, but the system was altered by Constantine still further.

This late system involved a new gold coin called a *solidus*, a new silver coin called a *siligis*, and sundry bronze pieces which were silvered and presumably meant to pass current for more than their intrinsic value. The new token coinage constantly needed attention and was frequently reorganized.

Whenever official coinage was in short supply there was recourse to copying (as mentioned in Chapter 2). These coins should not be regarded as forgeries pure and simple, although forgeries did exist – at Silchester bronze-plated iron coins of the middle of the 3rd century have been found (*Nism. Chron.* 1951, p. 132). Millions of copies of the inflation-period *antoniniani* (the archaeologist's 'radiates') were also made.

7. Dr. 27; from below the foundations of the east entrance of the Forum (Joyce's excavations). It was labelled at the time and is now in Reading Museum.
8. See further Chapter 6, p. 136 and note 6 (for list); also Fox, *Antiquity*, 1948, p. 172ff., and Berry, *Journal of Roman Studies*, XL1, p. 25ff.
9. P. 52.
10. LIX, p. 366.
11. Dio, *Historiae*, LXII, 2.
12. XCII, p. 130f. The absence of a street leading to the Amphitheatre Gate is very curious.
13. *Ancient Town Planning* (1913), p. 129. In this 40-acre square there are 2 plots of 3.4 acres (128 by 130 yards), 6 of 2.4 acres (128 by 89 yards) and 6 of 1.4 acres (89 by 80 yards). This seems to reflect a unit of land-survey of 120 Roman feet. Haverfield may be right; but the measurements are not exact.
14. It began as a broad swathe parallel with the E-W axis of the Forum; VI, B1 was probably a block of shops built alongside it. Part of V, 2 is also built on this alignment; VI, B1 was however superseded by VI, 1 at its eastern end, and XXXIV, 1 was built on this new angular alignment and so was XXXI, 1, though less perfectly. These houses or some of them governed the line of the street-metalling. It may be objected that if street XX-XXXII was carried through irrespective of the façade of the Baths, Street VI-XXXI would also have been built on the true alignment, or at least entirely on that of the Forum. It can only be suggested that this street formed part of the enlarged 'Haverfield Square' and that its eastern continuation beyond Insulae XXIV and XXVII was later, and belonged to a time when pride in the new streets had gone. Lack of interest in what would surely have been one of the best streets of the town is probably due to the temple-enclosure, Insula XXX, which robbed it of direct or convenient access to the East Gate. The later history of the Baths shows that the street-line was not always as sacrosanct as it was when first laid out. A later version of the latrine projects into XX-XXXII almost as much as the original portico had done.
15. LX, pp. 154-5.
16. It was completely sectioned twice in 1909, and measured sections are in the Reading Museum (the writer hopes to publish one of these together with objects found in the ditch-silt and in the bank at a later date, as part of the Silchester Excavation Committee's work at Silchester, 1954-6). An inadequate account, LXII, p. 317ff.

17. *Proc. Hants. Field Club*, VII, p. 43f. Original plans of this sector and the SW (Rampier Copse) entrance are in Reading Museum.
18. Boudicca, queen of the Iceni (Norfolk) rebelled in 61 and destroyed much of the fabric of early Roman Britain. See Richmond, *op. cit.*, p. 29f. The Fosse earthwork at Verulamium appears to belong to immediately post-Boudiccan times.
19. The 'annexe' is reminiscent of the reduction carried out in the enceinte of Verulamium: the Fosse-Wall complex excavated by Sir Mortimer Wheeler before the war (*Verulamium Report*, p. 25ff.).
20. LV, p. 426f. and Fig.; LXII, p. 319f. and Figs. also on p. 318; the 'double ditch' system is explained by the earlier nature of the underlying bank.
21. Foundations: LII, p. 752.
22. Cf. Corder, *Arch. Journ.* CXII, p. 20ff.
23. P. 84.
24. One of which, it will be remembered from Chapter 1 (note 38), is especially important because it records the name of the town. It is suggested in the second case that *c(iuitatis) C(allovesium)* could just as well be *C(allevae) c(Constitentium)* as in No. 1, but the existence of a *collegium peregrinorum* at all seems definitely to presuppose that a change in status, as suggested, had occurred.
25. One of his coins (*Roman Imperial Coinage*, V (ii), p. 550, no. 1) has the obverse inscription CARAVSIVS ET FRATRES SVI. The cordiality of the alliance is shown by the fact that Carausius issued many coins with bust and legend referring to his imperial partners but they issued no corresponding coins themselves.
26. *Roman Imperial Coinage* V (ii) p. 468, nos. 55ff.; p. 487, nos. 268ff., etc. Nos. 56, 57-9, 61ff., 75, 80 and 85 have been found at Silchester and illustrate the range of the original issue.
27. The account here given is that of Eichholz, *Journal of Roman Studies* XLIII, p. 41ff. The Chichester-Silchester road has been found subsequently.
28. Found at Arras, with a hoard of others.
29. Eichholz, *loc. cit.*, p. 45, note 17.
30. (1) Found in a room of XVIII, 2 (1897) (not mentioned in *Archaeologia*). There were 22 coins of Carausius and 4 'radiates'. (2) I, 1, 1865 (*Journal*, 24th November 1865): 42 coins, of which 36 are of Carausius, 5 'radiates' and 1 a late Constantinian coin probably not really belonging to the hoard. The account in XLVI, p. 340 is most misleading as to the number of early coins of Carausius overstruck on 'radiates'. The hoard is presumably at Stratfield Saye, but the coins have been distributed amongst the general Silchester Coin Collection there and not kept separate. Only 10 or 11 overstruck Carausius coins are in the series. (A full account of the Silchester hoards is forthcoming in the *Namimatic Chronicle*.)
31. XLVI, p. 364.
32. *Ibid.*, etc.
33. One of 18 coins (LIII, p. 269) mostly of Constantine I, deposited about 337; a second, 87 coins (LXI, p. 478f.) deposited with a penannular brooch about 350; a third, 36 coins (LIII, p. 284) deposited about 375, perhaps earlier; and a fourth (not published) found in a house S. of the Forum in 1892, 8 unworn Constantinian coins deposited about 337. The two Carausian hoards mark unrest at the time of that emperor's death; the only other recorded hoard (p. 149) belongs to the time of the Albinus crisis.
34. P. 186.
35. *Num. Chron.* 1955, p. 235ff.
36. This figure corrects earlier figures. In 1952 all the Silchester coins, including about 5,000 at Stratfield Saye, previously unlisted, were catalogued.
37. The Honorius *solidus* is in the Collection. Arcadius: a *solidus* of Milan mint, as *RIC* X, no. 35b or a later variant (found in 1791, *Gent. Mag.* 1792, p. 529).

- Constantine III: unspecified but presumably a *siliqua* (*Hearne's Collections*, ed. O.H.S., IV, p. 360).
38. A *tremissis* is a third of a *solidus* – a late coin. The weight was found by the late J. W. E. Pearce in cataloguing some of the Silchester coins (*Num. Chron.* 1929, p. 332). The identification is almost certainly correct: one side has traces of a head and lettering. Like 17th- and 18th-century coin-weights, this was used to test the weight of coins received in payment. It is at present 5 grains light.
 39. E.g. May, *op. cit.*, Pl. LVI, etc.
 40. LIV, Pl. XXVII, 1. Silchester: 2 rim fragments, green glass.
 41. Examined by the late E. T. Leeds as one of his last pieces of work.
 42. Joyce's *Journal*, last page of vol. II. Now lost.
 43. LIV, p. 233f. Date: Prof. Ifor Williams quoted by O'Neil, *Antiquity* 1944, p. 114. *Corpus Inscript. Insular. Celtic.*, 496.
 44. *Antiquity*, 1944, p. 113ff.; earthwork described, *Antiquity*, 1943, p. 188ff.; another section, *Berk. Arch. Journ.*, LIV, p. 56f.
 45. *Arch. Journ.* C, p. 177f.
 46. P. 177.
 47. A concise account, Kirk, 'Anglo-Saxon Cremation and Inhumation in the Upper Thames Valley in Pagan Times', in *Dark Age Britain: Studies Presented to E. T. Leeds* (1956) p. 123ff. See also, on the point of general settlement, Leeds' considered (and last) statement, *Oxoniensis* XIX, p. 45ff.
 48. The brooch is in the Ashmolean Museum. Its provenance is not beyond dispute, but it seems acceptable.

CHAPTER 4

1. LXII, p. 317ff.; XCII, p. 130ff.
2. LIV, p. 231; LVIII, p. 419.
3. Apparently. The line is not beyond dispute in the south-east.
4. XCII, p. 143.
5. A ferruginous mass of sand and pebbles.
6. LXXX, p. 260ff., also p. 271f.
7. Despite LXI, p. 483-4, which is a spot needing re-examination. The rounded corner – the only corner so treated – is curious.
8. Despite Aubrey, *Monumenta Britannica*, MS. Bodl. Top. Gen. C. 24, f. 211^v where the 'vestigium of an Arx, Barbican or Ridout' is noted at the north-west corner. The mound surrounding the corner was excavated in 1956 and found to consist of spoil tipplings, probably from Joyce's excavation of the North Gate in 1873. It is quite uncertain what Aubrey meant. There is nothing else on the ground corresponding to his marginal sketch.
9. XCII, p. 135.
10. *Ibid.*
11. LXII, p. 322f.
12. LXII, p. 323, and Fig. 2, p. 319.
13. LII, p. 754ff.
14. Of which a voussoir brick was found. A similar find occurred at the South Gate.
15. LXI, p. 474ff.
16. LII, p. 750ff.
17. LII, p. 752ff.
18. XCII, p. 130, cf. LIV, p. 237.
19. LV, p. 424ff.

20. XCII, p. 131f.
21. LIV, p. 230ff.
22. LVIII, p. 419.
23. I.e. lime mortar with ground brick included for improved hydraulicity. A more decorative version with larger pieces of brick, occasionally also with chips of stone ground smooth, is known as *opus signinum*. An almost identical mixture is employed in the structure of the Town Hall, Reading (1875), as alterations to the Silchester Gallery in 1956 showed.
24. LIII, p. 268. From Pit V, Ins. III (1898). Similar roundels have been found at High Rochester (*C.I.L.* 1290), York (*E.E.* VII, 1160) and Corbridge (*Arch. Ael.*,³ VII, p. 178). See Jacobi, *Salzburg-Jahrbuch* 1910, p. 49ff., etc. British discoveries of other parts of the set or similar sets: Aldborough, *Arch. Ael.*, *loc. cit.*, Corbridge, *ibid.* p. 175; and cf. Ruhlmann, *Publ. serv. ant. du Maroc*, I, p. 33ff. One badge (at Zugmantel) was associated with a coin of Septimius Severus and another (at Thamusida) with one of Pius.
25. LII, p. 757; close prov. from old label; described as a netting-pin. On these objects, see Macdonald, *The Roman Wall in Scotland*² (1934), p. 203ff., and *Germania*, XVII, p. 110ff.
26. LIII, p. 540ff.
27. Atkinson, *Excavations at Wroxeter 1923-7* (1942), Appendix C. See however Goodchild, *Antiquity*, 1946, p. 70ff.
28. In Montenegro. LV, p. 39f.
29. XLVI, p. 351ff. *passim*. The oyster shells are probably the residue of those burnt to make fine plaster rendering for the walls. As the 1892 excavators realized, they have no stratigraphic connexion with the occupation of the Forum.
30. It must have been near here that Stair found the 1744 inscription to Hercules Saegon-, but see note 44.
31. It may also be mentioned that the east entrance of the Forum is not centrally placed in the east wall. It has been considered that this was done in order to align it with the street opposite, but as the Forum preceded the street-plan this does not appear possible, and some other explanation, such as a previous deep disturbance of the ground at the centre of the east wall, should be sought. Re-excavation is needed.
32. Joyce's *Journal*, May 2, 1867.
33. Where the Eagle was found, but this occurred under an upper layer of burning and not that here mentioned. *Journal*, October 12th, 1866.
34. I am much indebted to Professor I. A. Richmond for his criticisms of Fox's reconstructions (*Builder*, April 7th, 1894) and for general help with these passages.
35. So, rather than anything to do with the setting-out. Or, conceivably, post-holes of a pre-Forum house.
36. Kähler, 'Die röm. Kapitele des Rheingebietes', *Röm.-germ. Forsch.*, XIII, 1939 p. 32. Type C. Reviewed with summary by Radford, *J.R.S.*, 1943.
37. Caerwent, Kähler, *loc. cit.*, Bath, Richmond-Toynbee, *J.R.S.*, 1955, p. 97f.; Cirencester (Giant Column), LXIX, Pl. x.
38. LXI, p. 485.
39. Prof. Richmond.
40. LIII, Pl. xxxvii, 1; cf. Pl. xxxviii.
41. *Journal*, October 16th, 1866.
42. *Ibid.*, November 30th, 1868. Joyce thought that they were perhaps parts of bottles. This is not likely.
43. Strasbourg: Forrer, *Strasbourg-Argentorate* II (1927), p. 786, Fig. 587. Switzerland: *Jahrb. schw. Ges. f. Urg.*, 1951, p. 121, Taf. XVII, 2. Complete, about 40 by 44 inches.

44. In one of Dr Collet's letters, BM Add. MSS., 6212, f. 36.
45. These figured, *V.C.H. Hants.* I (1900), Figs. 7, p. 282.
46. *Journal*, July 1869, *Arch. Journ.* XXX, p. 24, LIII, p. 558f.
47. *Arch. Journ.* XCVIII, p. 36, Pl. I.
48. Paris: *Cat. Mus. S. Germain* II (1921), p. 183, Fig. 96. Holzhausen: *O.R.L. H.*, Taf. 8. Saverne; Forrer, *op. cit.*, p. *4*.
49. LIII, p. 557f.; *Antiq. Journ.* XXIV, p. 7ff.
50. LIII, p. 558.
51. *Phil. Trans.* 1748, p. 603.
52. Also might be mentioned (a) part of a letter A in bronze, originally about 8 inches high. It is $\frac{1}{2}$ inch thick and has a peg at the back for attachment to a wooden or stone background. Found *temp.* Joyce, ? Forum. (b) Part of the foot of a large Bath stone statue otherwise unevicenced; it wears an elaborate sandal. In or near Forum, 1882 (*Add. to Journal*, November 27, 1882).
53. *Journal*, October 9th, 1866, with section, XLVI, p. 363ff.
54. Silchester Collection. An eagle, improbably said to be of steel, perhaps really of tinned bronze, was exhibited as a Silchester find to the Society of Antiquaries in 1788 (IX, p. 370).
55. *Sézéria: Annuaire du Jura*, 1859, p. 149ff. (one brief mention). Drawing kindly communicated to the writer by M. Ph. Chabro, curator of the Musée Lons-le-Saunier; Queen Victoria-st.: *Journ. Brit. Arch. Assn.* XXIX, p. 182ff., Pl. 6. Evreux: Coutil, *Arch. Gaul.-carol.*, IV, 1921, Fig. 101, no. 9. Louvre: Ridder, *Bronzes du L.*, I (1913), Pl. 60, no. 1006. Cf. also Hocing, *Am. J. Arch.*, XXIX, p. 172ff. for other possibilities.
56. See Richmond, *Roman Britain*, 1955, p. 88ff. for a fuller account of local government.
57. *C. I. L.* VII, no. 8. MEMORIAE/ FL VICTORI/ NAE T TAM/ VICTOR/ CONIVNX/ POSVIT, To the Memory of Flavia Victorina. T. Tammovius Victor, her husband, set this up.
58. LIX, p. 341ff.
59. Atkinson, *op. cit.*, Appendix B.
60. *Journal*, April 6th, 1865.
61. Carcopino, *Daily Life in Ancient Rome*, (Penguin Books, 1936), p. 165.
62. Skulls of very young babies were also found in the drains of the Baths (LIX, p. 369) and although the *Archaeologia* report states that it would be 'highly speculative to account for their presence' it is clear that the establishment was sometimes used for the sinister purpose of infanticide. This was very common in Roman Britain. At Hambleden villa (Bucks) 97 infant burials were found in a courtyard: LXXI, p. 150. Cf. also *Verulamium Report* (1936), p. 138f.
63. House at SE. corner, Ins. III (1891: LIII, p. 281ff.) was considered at the time of excavation as probably a commercial suite of private baths; House 2, Ins. XIX (1898: LVI, Pl. xi; p. 234) certainly had private baths. This is a late house.
64. Kretschmer, 'Hypocausten', *Saalburg-Jahrbuch* 1953, p. 8ff (but see also *ib.* 1956, p. 38f.)
65. LIX, p. 366. Another tile, said to bear a similar but not identical stamp, was found in the rubbish of a brick-field at Little London near Silchester. If so - the tile is lost, and its own inscription seems never to have been given - it means that an imperial tiler existed there from a very early date in the Roman occupation. *Antiq. Journ.* VI, p. 75, etc. The tile is supposedly illustrated in *Proc. Hants. F.C.*, XVI, p. 59, but the illustration is actually of the *Silchester* tile, from a negative in the possession of Reading Museum. It is curious that only one tile so inscribed was found at the Baths.
66. LIX, p. 354. The others covered a wide range, but were predominantly of the middle of the 3rd century.

67. As at Vipasca in Spain (mine baths), regulations for the conduct of which survive, dating from the time of Vespasian (69-79). *Dessau, I.L.S.*, 6891; trans. *An Economic Survey of Ancient Rome*, III, 1937, p. 169: women bathed from sunrise to noon, men from one to eight p.m. Mixed bathing is not likely, but see Carcopino, *op. cit.*, p. 257.
68. *LIX*, p. 349f.
69. Chesters: *Arch. Ael.*⁴, VIII, p. 284ff.; also in fort-baths at Mumrills (Antonine Wall), *P.S.A. Scot.*, LXIII, pp. 471, 481ff. Villas: Kingsweston (Glos.) *Trans. B. and G. A.S.*, LXIX, p. 32; Hucclecote, *ib.* LV, p. 343; Wraxall (Som.), unpubl. but inspected by the writer; Stroud (Hants), *Arch. Journ.* LXXVI, p. 33ff. See also Lydney, *Report*, 1932, p. 53; Ashstead (Surrey), *S.A.C.*, XXXVII, p. 148; and Silchester, two examples, one where the flue does not apparently run in via the *praefurnium*, *Ins. xviii*, Block 4, LVI, p. 109; and in a composite domestic hypocaust, House 1, *Ins. xxxiv*, room 9, where the drainage explanation given in the next paragraph of the present text seems to hold water. The two installations referred to in this paragraph are at Kingsweston and Wraxall.
70. Kretzschmer, *op. cit.* p. 33.
71. *Ibid.* p. 32f. and Fig. 20, p. 31.
72. *Epistulae Morales*, 56.
73. *Itinerarium Curiosum* (1724), p. 170f.
74. *Phil. Trans.* 1748, p. 603ff., etc.
75. LXXVIII, p. 111ff.; summary, *Arch. Camb.* LXXXIII, part 1.
76. A most horrific account of early Christian martyrdom in the arena (it was customary to condemn persons of humble birth to the amphitheatre, especially for crimes of treason, whether they were Christians or not; and Christian refusal to accept the Emperor's godhead was regarded as *lèse-majesté*) is preserved in extant letters from a survivor, quoted by Eusebius, *Hist. Eccl.* V, 1 (trans. Loeb Library, I (1936), pp. 405ff. The year, 177; the place, Lyons.
77. L, p. 271ff. The excavation took place during one of the bouts of illness suffered by Joyce towards the end of his life, and the *Journal* contains no details. How much has been explored and how much laid down from crop-marks on the map is unknown. It is an important site ripe for re-excavation. 1893 work: LIV, p. 222ff.; baths, L, 271ff., LIV, p. 227.
78. *Lydney Report* (1932), p. 44ff., Herbord (Vienne), *cf.* LIV, p. 224.
79. *Oxf. Class. Dict.*, p. 723.

CHAPTER 5

1. See, in general, Koethe, *Die kelt. Rund- u. Vierecktempel der Kaiserzeit*, R. G. Kommission 23, 1933.
2. LII, p. 744ff., LVIII, p. 414f.
3. The word comes from the Greek τέμνω, to cut, and means something cut off or set apart; so does the Latin *templum*.
4. LV, p. 429.
5. LII, p. 749.
6. LXI, p. 206f.
7. LXI, p. 207f; p. 215ff.
8. *Cf.* Richmond, *Roman Britain*, 1955, p. 190.
9. LIV, p. 206ff.
10. *Journal*, September 13th, 1872. Under the same date is mentioned part of a box flue-tile, possibly from the structure of a false dome or domed ceiling, built as lightly as possible. At Pagans Hill in Somerset the temple appears to have had such a dome made of voussoirs of calcareous tufa, a very light and porous material,

which has been noted in apsidal rooms, i.e. rooms likely to have had domed ceilings, elsewhere: *Proc. Som. A.S.*, XCVI, p. 121; cf. *B. & G. A.S.*, LXIX, p. 34. Barrel-vaults fall somewhat into the same category; of tufa, at Chesters on the Roman Wall, *Arch. Ael.* VIII, p. 278ff.; of hollow tiles, Bath, cf. LX, p. 444, note, which deals with a Silchester example further explained in the next chapter of this book, Ho. 1, Ins. XXXIV: *ib.* p. 442ff.

11. *Journal*, September 10th, 1872, and October 25th.
12. *ib.* November 7th and October 11th.
13. LIV, p. 209. Actually, aragonite.
14. LVII, p. 95f.
15. Cf. *Journ. Brit. Arch. Assn.* 1953, p. 8, Fig. 3; cf. also Fig. 4.
16. LXI, p. 479f.; Pl. lxxxiii, Block 1.
17. LV, p. 224, p. 237f.
18. As e.g. in the House of the Vettii, Pompeii, Mau-Kelsey, *Pompeii, its Life and Art*, 1899, p. 265, Fig. 264; LV, p. 306.
19. *Journal*, April 30, 1869; now at Stratfield Saye House.
20. Rather than an augur's staff (cf. *Richb. Report II*, 1928, p. 50f., and the example there cited): the stump remaining seems too thick. The method of girding referred to in the present text is known as the *cinctura Gabina*.
21. LV, p. 239 and Fig. It was lost in a fire during the war at Wasing House near Silchester (information from Sir William Mount).
22. *Roman Britain*, 1955, p. 186ff.
23. This process - syncretism - is well known for the classical lands also. The Clarian, Delian, Delphic, Lycian and half a dozen other forms of Apollo, for example, must have begun each as little local gods.
24. Dedication to Segomo, on statuette of a horse (Côte d'Or), *Dessau* 4539, *Rev. arch.* 34, Pl. xix and p. 209. Other dedications, see *Dessau*, 4537, 4538, *C.I.L.* XIII, 5340 and V, 7868.
25. *V.C.H. Hants I*, 1906, p. 280.
26. LVII, p. 110f.
27. LVII, p. 250 and Fig. 8, p. 249.
28. LIII, p. 284. Mid-2nd century. About ten examples are known from Britain. (Information from Mr Frank Jenkins, F.S.A.)
29. LVII, p. 88. Allier-made (Jenkins). Found in Gaul as grave-goods and as temple offerings.
30. LVII, p. 111.
31. Pliny, *Hist. Nat.* XXXVII, 10.
32. Richmond, *op. cit.* p. 180, *Arch. Ael.* XXIX, p. 6f. Possibly also imported for food: *Pinus pinus* kernels are *pinocchi*.
33. *Arch. Journ.* XI, p. 57; the finder had seen 7 more in the Stair Collection from Silchester in 1821. Another at Stratfield Saye, *Arch. Journ.* VIII, p. 245; 4 others in Reading Museum, cf. LVII, p. 250, LVIII, p. 422, the last perhaps also a stray from Ins. xxx. The votive nature of these objects is well attested; cf. their discovery at the Wood Eaton (Oxfordshire) temple-site, *Oxonensia* XIV, p. 32ff.
34. *Journ. Rom. Studies*, XLVI, p. 146.
35. LIII, p. 563ff. Comparative plans: *V.C.H. Hants I*, 1906, p. 277; XCV, p. 15f., *passim* (Tripolitania). Plans facing west, e.g. XCV, Fig. 6. Cf. also early church under St Severin's, Cologne, built c. 300, 35 by 29 feet: Toynbee, 'Christianity in R. B.', *Journ. Brit. Arch. Assn.* 1953, p. 6 and Pl. 1. But for its position under a later church, it would have been hard to identify this as a Christian building from its (primary) plan, which is even more primitive than the Silchester example (if there are not two periods here as well).

36. *Verulamium Report*, 1936, pp. 108, 148, Pl. xlviii. In itself, the design is not a sound criterion of date: a very similar floor occurs in Trajan's Forum: Blake, *Mem. Amer. Acad. in Rome*, XIII, Pl. 8.
37. Toynbee, *op. cit.* p. 7f.; cf. LIII, p. 566.
38. *Ibid.*
39. *Ibid.*
40. Cf. Radford on the Pagans Hill (Som.) temple, *Proc. Som. A.S.*, XCVI, p. 123ff., where it is suggested that this and the Weycock Hill (Berks.) temple were built to a closed plan.
41. Toynbee, *op. cit.* p. 5f.
42. XLVI, p. 363; *Journal*, June 9th, 1869. From the room next to that where the Eagle was found.
43. VIII, p. 449. Property of the late Sir Charles Chute of The Vyne, near Basingstoke. Lydney curse: *Report*, 1932, p. 100, Fig. 28, 1. Haverfield dismissed any connexion as unlikely, but there are only two other occurrences of the name in Britain: see Toynbee, *op. cit.*, p. 20f.
44. *Ibid.* Pl. V and p. 18.
45. LXII, p. 330. The Ordnance Map (on Mill Stephenson's authority) marks the cemetery by the North Gate. The pottery bottle from the sarcophagus is now in Reading Museum.

CHAPTER 6

1. LXII, p. 331; XCII, p. 135.
2. XCII, p. 124ff.
3. XCII, p. 127, Pl. xxxvic.
4. LIII, p. 561; LVI, p. 120; and another; a further scrap was found in the filling of the 'Belgic Defence', *Insula xxm-xxn*, 1955. Similar but not identical antefixes have been found at Dorchester. *Journ. Rom. Studies*, XLVI, p. 141f. pl. xvi, 2.
5. LIII, p. 567, Pl. xli.
6. Houses lying at an angle to the streets and adapted to or otherwise affected by their passage:
 - i, 1: conformity of N. block, dated by coin of Commodus, 180-192: XLVI, p. 339.
 - ii, 1: old building
 - iii: block, NW. corner
 - iv: mentioned in present text
 - v, 1
 - vi, 22
 - ix, 2, 3
 - xiv, 1: walling under N. wing of this house
 - xv, 1, 2, 23
 - xvi, 1, 2, 3
 - xvii, 3
 - xviii, 1, 2, 3, 21
 - xx, 28
 - xxi, 3: N. wing
 - xxii, 1
 - xxiii, 2: associated building conformity dated by coin of Aurelius, 161-180. LVII, p. 234
 - xxiv, 2
 - xxvi, 3
 - xxvii, 1 (E. building), 2
 - xxviii, 1, 2, 22
 - xxxii, 1, 2
 - xxxiii, 4, 5
 - xxxiv, 1
 - xxxv, 2: 2 unnumbered blocks with tess. floors

This list offers the basis of an Old Town Plan of Calleva. The Forum-Basilica, Public Baths, and temples in Ins. xxx and xxxv should be added; the first seems to have been the latest addition before the street-plan was imposed.

7. LX, p. 432ff., esp. 436f. and Fig. 2. (N.B. All houses subsequently mentioned in the present text are quoted by their Insula number followed by their own number following the order of excavation and publication in the *Archaeologia* reports.)
8. LVIII, p. 417 and Pl. xxx.
9. LIX, p. 338ff., and see Fox, *Antiquity* 1948, p. 174ff.
10. LVIII, p. 18ff., esp. p. 23ff. and Fig. 1.
11. *Verulamium Report* (1936), p. 140, Pl. c. For a very good example, also found at Verulamium (1956), see *Illus. London News*, 19 Jan. 1957, pp. 106-8, Fig. 9.
12. Cf. an isolated building belonging to xxiii, 2: LVII, p. 234, Pl. xxix.
13. *Verulamium Report*, p. 140.
14. *Journ. Rom. Studies* XLV, p. 145; XLVI, p. 146, Pl. xviii; *Camulodunum Report* (1947) p. 90f., Fig. 19 and Pl. ix.
15. *Roman Exeter* (1952), p. 10ff.
16. This section should be read e.g. with *Verulamium Report*, p. 78ff. which offers dated houses. Ward, *Romano-British Buildings and Earthworks*, 1911, p. 141ff. is still worth reading on the subject of Callevan houses, though out of date in many respects.
17. *Journ. Rom. Studies*, XLI, p. 25ff., esp. p. 30.
18. Cf. the two dated examples in this part of the town, nos. 1, 1 and xxiii, 2 in the list, note 6 to this chapter.
19. LVI, p. 230ff. See note 49.
20. Ward, *op. cit.* p. 145ff. etc. Ward makes a more ambitious suggestion in the case of xxiv, 2, arguing, from the position of the doorways in the room concerned, that there was a stair of three flights.
21. LIV, p. 213 and Pl. xviii.
22. LIX, p. 338ff.
23. LVIII, p. 25.
24. LX, p. 440.
25. *Primitive Locks and Keys* (1883), p. 24.
26. LVII, p. 247 and Fig. 3.
27. May, *Warrington's Roman Remains* (1904), p. 82.
28. Soda and sand, a mixture still used for the Venetian (Murano) glass today.
29. LIV, p. 217.
30. LX, p. 442ff., Figs. 4 and 5.
31. XL, p. 411 and cut.
32. LIV, p. 473. Some of the workmen, including the foreman, stole coins during the emptying of the pot and the washing of its contents. Five coins later came to Reading Museum (the report cited lists only 253), and the hoard may have been as large as 300 or more specimens. Information recorded by Challenor Smith and from Mr Fred Smith, curator of the Calleva Museum, who was there at the time.
33. *De Architectura*, VII, 3, 7. Ward, *op. cit.* p. 281ff. The lime-water and milk acted as solvents of lime, the latter because of its saccharine content. It is not known for certain that the Romans used milk for this purpose, but the mediaeval painters certainly did.

Colour has been found at Silchester: small balls of blue frit, a pot containing ochre, another half-full of mixed ochre and chalk; a Purbeck mortarium used for grinding red ochre and still bearing traces of this substance; and also some realgar (arsenic sulphide), probably the native and not the artificial material, a mineral of orange-red colour, Pliny's *sandaracha*: LV, p. 252.

34. LV, p. 249*f.*, Fig. 5.
35. LX, p. 154.
36. LVIII, p. 19; *ibid.* p. 22.
37. E.g. LIII, p. 265, note; porphyry, LX, p. 155. Shale plaques also occur.
38. LV, p. 420*f.*
39. Dr Wollaston, *Thermae Romano-Britannicae* (1864), p. 25. Sir Richard Colt Hoare went one better and had a carpet woven to the design of one of the mosaics he excavated; this can still be seen at his house, Stourhead, Wilts. Another mosaic was taken round on a cart for exhibition at public-houses etc., its authenticity attested by the vicar of the parish in which it was found: Morgan, *Romano-British Mosaic Pavements* (1886), p. 94*f.*
40. LVII, Pl. xxviii.
41. LV, Pl. xiv.
42. Compare the above with Itchen Abbas, Hants., *Journ. Brit. Arch. Assn.* XXXIV, Fig. pp. 234-5, as against Brislington, Som., *Proc. Clifton Antig. Club*, V, Pl. xvi, or Kingsweston, Glos., *Trans. B. & G. A.S.*, LXIX, Pl. VB, VII; etc.
43. E.g. LV, Pl. xiv.
44. LVII, Pl. xxviii.
45. *Ibid.*; LV, Pl. xiv, etc.
46. LVIII, Pl. iii.
47. LV, Pl. xiii.
48. LIII, Pl. xl.
49. LVI, Pl. xiv. If there were in reality no coarse margin, the pavement would seem to be unique. On the date of this floor, see D. Smith and G. C. Boon, in a forthcoming paper. Frampton, Lysons, *Reliquiae Britannico-Romane* I (1813), Pt. iii, Pl. v; Withington, *ib.*, III (1817), Pt. i, Pl. xx.
50. LVI, p. 248.
51. *Verulamian Report*, p. 142*f.*
52. *Journal*, October 8, 1866; a chisel-like implement of iron, which may have been used for mosaic-work, occurred with these strips and tesserae.
53. Nine inches long, with an axe-like head hooked at one extremity; the hook may be the result of damage to an original point. *Journal*, Feb. 28th, 1865 = XL, p. 412.
54. *De Architectura*, VII, 1.
55. LIII, p. 273.
56. LV, p. 227, note b; see also pp. 225, 226 for others.
57. LIV, p. 214; etc.
58. LVII, p. 230, Pl. xxvii (= xxiii, 1) and *ibid.* p. 238 (= xxiii, 2). As the excavators remarked, these pavements (which seem to be unique in Britain) are interesting as the precursors of mediaeval tiled floors, although these lacked the tessellated work.

CHAPTER 7

1. LVI, p. 232*f.*, Pl. xii, xiii, and *cf.* Kretzschmer, *Saalburg-Jahrbuch* XII, p. 32.
2. LV, Pl. xiii. The tiles have been replaced by cement.
3. LVIII, p. 19. Room 11, plan, Pl. ii. Others are xxxii, 1 and 3, xxxv, 1 and perhaps xxvii, 2 and xvii, 1 among less certain examples.
4. LIV, p. 153.
5. Judging by the presence of black silt of 'pond-bottom' appearance in the ditch of the 'Belgic Defences', opened in 1954 and 1955. In the wet summer of 1954 water lay at -8 feet; in the dry summer of 1955, about -10½ feet. The difference is actually less, because the ground is higher inside the walled area than outside, where the 1954 trench was cut.

6. LII, p. 743.
7. LVII, p. 93.
8. LVI, p. 121ff., Pl. viii, centre and right. The half-barrel has not survived. Material, LVII, p. 253. The bands were apparently of twisted hazel or withies.
9. LIV, p. 447f., LV, p. 413ff., LVI, p. 121ff.
10. LV, p. 232ff., Figs. 1 and 2; see also p. 254ff., and *Vitruvius* X, 12. The piston-barrels contained 1.1% of tin which, as it does not occur naturally with British lead ores, must have been added. This was probably done in order to increase the hardness, durability and strength of the pipes for their exacting purpose: LVII p. 415f.
11. Cf. 26. *Bericht der r.-g. Komm.*, p. 129, Fig. 56, a Trier specimen dated to about 300 or before. When found, part of the squared oak supply-pipe still remained in position above the pump. Two other Continental examples are known, apart from the Bolsena, etc., bronze specimens.
12. The size of pipes, according to *Vitruvius*, VIII, 6, 4, was in fact measured by the width of the original lead sheet *before* bending up. Joints were made by three methods: (a) by 'burning' with pure lead applied at a very high temperature; (b) by 'burning' with lead containing a small percentage of tin; and (c) by soft-soldering. A flanged pipe from XXXIV, 1 (*Journal*, November 4, 1873) illustrates the second method. The solder used on the pump-barrels contained 73.59% lead to 25.42% tin; a cake of solder weighing 5½ lb., found in 1894, 61.83% lead to 38.01% tin, mixtures differing widely from Pliny's *tertium* solder of *Hist. Nat.* XXXIV, 48, which was made from lead and tin in the proportion 2:1 — a mixture still used for some purposes. See Gowland, LVII, p. 413ff. for these and other details.
13. LV, p. 422ff. It may be compared with a very much larger installation at Lincoln, where the pipes were set in concrete and were in any case of tile and not of wood: *Arch. Journ.* CXI, p. 106ff., where it is also suggested that at 50% efficiency the Silchester pump from *Insula xiv* could have supplied 5 gallons of water per minute.
14. As shown in a 17th-century woodcut reproduced in Buffet-Evrard, *L'eau potable à travers les âges* (1950), p. 152, Fig. 141. The Romans made considerable use of water-power. Hand boring could produce an elm pipe about 38 ft. long and of 2-in. bore in one day, cf. Buffet-Evrard, p. 152.
15. It may therefore be of 3rd- or 4th-century date, since it appears to be associated with the Wall-ditch and not that of the Second Roman Defence.
16. LVIII, p. 32; *Journ. Rom. Studies*, XLIV, p. 107, no. 25. Found by the curious accident of the writer happening to pause by the case in which the bowl was displayed during a lecture on the Collection. The afternoon sunlight poured obliquely through the room and bathed the bowl in a strong side-light, which brought up the lettering lightly incised on the flange.
17. *Eph. Epigr.* IX, 1311a.
18. LV, p. 231f.
19. Liversidge, *Furniture in Roman Britain* (1955).
20. *Ibid.* p. 47, Fig. 61. Partly burnt in antiquity. The joints are, properly, tapered dove-tail housing joints.
21. *Ibid.* p. 39, Fig. 54.
22. *Ibid.* p. 8, Fig. 33; (LV, p. 430, described as some kind of hardwood; identified as shale in 1952, when also the table-top was found).
23. *Ibid.* p. 37f., Figs. 44-5.
24. II, 2; V, 3; VIII, 4; IX, 3; XVI, 1; XVII, 1, 4; XIX, 1, 2, II, 2 = LIII, p. 278; XIX, 2 = LVI, p. 234.
25. LVIII, p. 19f.
26. LVIII, p. 417. Verulamium votive deposits: *Report*, p. 117.
27. LVII, p. 237.

28. LIV, p. 153f., Fig. 21; cf. *Newstead* (1911), p. 274, Pl. liii, 2 and *P.S.A.Scot.*, LXXXVII, p. 39, Fig. 10, C71 (Carlingwark).
29. LVI, p. 241f., Fig. 3; from XIX, 1. Recently cleaned.
30. LVII, p. 247, presumably, but certainly from the 1900 hoard of ironwork. May be compared with an example from Great Chesterford, Essex, *P.S.A.Scot.*, loc. cit., pp. 42, 44, and Pl. 1, right. There are actually three chains in the hoard, two of this type, Piggott's II, and one of Piggott's I (Stanfordbury). All are very much broken, and need not necessarily be of a date similar to that of the deposition of the hoard. The Great Chesterford specimen however occurred in another hoard of iron-work of comparable sort and date. Several other examples are known.
31. LVII, p. 244 (Ins. XXIII, pit 10); stamp on handle (incomplete) PIAV. Not of British manufacture.
32. LXI, p. 485, Fig. 4 (XXXVI, 1).
33. LVII, p. 247 (1900 hoard).
34. LVII, p. 246 (Ins. XXIII, well). Belongs to Hawkes's 'concave profile' type deriving from 3rd-century Rhenish examples; but the belly is still 'concave-projecting'. See *Aspects of Archaeology*, 1951, p. 179ff. British.
35. Unusual type, unfortunately in many small fragments, with concave base and upright, slightly everted rim terminating in flange. Handle with plain bronze lugs. Perhaps a rough approximation to Eggers's 'Westland' type, conveniently, Wheeler, *Rome beyond the Alps. Frontiers*, 1954, p. 81, Fig. 11 inset. Probably of Hallstatt rather than of later Iron Age origin, as a type: cf. *Bay. vorg. Blätter* XXI, p. 7, Fig. 3 except for handle, and decoration on this example. Probably imported.
36. LV, p. 429 (pit). In fragments. Internal diameter below rim, which is flaring and permitted the vessel to be set inside another such as a smaller version of the patera described above, note 31, about 2½ inches only. The perforations follow a fret pattern. Imported.
37. LVIII, p. 32, beaten up from several plated of metal joined together; conical, with rounded shoulder. Iron lugs for handle.
38. LIV, p. 238, LVIII, p. 32, and other fr. Quite characteristic of the 3rd-4th centuries, when the Cornish tin mines were once more under exploitation.
39. Thin split oak 4 feet long, bent round to form a tub a foot in diameter. Undoubtedly LXI, p. 478 despite mention of 'staves'. There are also several other wooden articles, such as oak shovels which were perhaps oven 'peels' for bread, and a basket (referred to in the text), LXI, p. 478, Fig. 1.
40. LVI, p. 111; May, *The Pottery Found at Silchester* (1916), Pl. LXIX, B.
41. LIII, p. 285.
42. *Antiquity*, June 1955, p. 68ff. 'Mayen' is more correct than Niedermendig or Andernach, the other two names current.
43. LVII, p. 252ff., and additional notes at the end of each year's report down to 1908 inclusive.
44. Animal remains are listed in each year's report down to 1908. Some of the shellfish have been identified subsequently. The pheasant is an interesting case, and representations of it have been found on painted wall-plaster at Verulamium (1956): *Illus. London News*, 19 Jan. 1957, pp. 106-8, Fig. 6.
45. Fox reintroduced *escargots* to their old haunts, but the birds speedily made an end of them (note by Challenor Smith).
46. LIII, p. 287ff., and subsequent reports on animal remains.

CHAPTER 8

1. P. 50.
2. Chapter 2, note 27.
3. If the defence is pre-Roman, this must follow.

4. Strabo, *Geographica*, IV, 5, 2.
5. From calculations on a basis suggested by Applebaum, see *Proc. Prehist. Soc.* 1954, p. 112 and esp. notes 7, 8.
6. LVII, p. 252; etc. See annual lists of plant remains after 1900.
7. *Triticum spelta*. See Helback, *Proc. Prehist. Soc.* 1952, p. 213, p. 216ff.
8. Helback, *op. cit.*, p. 220. This paper is full of valuable information.
9. *Ibid.* and p. 213.
10. LVII, p. 253; LVIII, p. 35. Regarded as doubtful. Cloth: on a bronze buckle-plate, XCVI, p. 147.
11. LX, p. 165ff.
12. Unlike the deer and wild animals. There is room for much work on the bones from Silchester. See LIII, p. 285ff., etc., and cf. LV, p. 135.
13. Applebaum, *Proc. Hants. F.C.*, XVIII, p. 119ff.
14. *Proc. Soc. Antiq. XXXII*, p. 185ff.
15. The *V.C.H. Hants* IV (1911) p. 56 says that the manor of Mortimer West End was always joined with the manor of Stratfield Mortimer. It is possible that Mortimer West End, however, was Ralph de Mortimer's portion of the Silchester manor (which was divided into two at the time of Domesday [*ibid.* p. 52]), later added to the Stratfield Mortimer manor. Several anomalies, such as the fact that Mortimer is in Berks and Mortimer West End in Hants, would thus be more understandable.
16. We know nothing positive about tenure. If it was on the classical pattern, the land would be town-property and rented to townsfolk. These estates would tend to become private property. Some of the nobles may have had extensive estates elsewhere in the tribal area.
17. I am indebted to Dr Applebaum for help with certain points in this section.
18. LIX, p. 335f.
19. Corn-dryer: Goodchild, *Antiq. Journ.* XXIII, p. 148ff.; see also *Arch. Journ.* CII, p. 110 (reconstr.). Several others have been found since the date of these publications. Spelt drying: Helback, *op. cit.*, p. 209.
20. LXXI, p. 151ff.; compare Pl. xiv, 2 with our Ins. xxxi, 1 example (LVIII, p. 416, Pl. xxix).
21. LVIII, pp. 34-6 *passim*.
22. Coulters and ploughs etc.: Payne, *Arch. Journ.* CIV, p. 82ff.; useful drawing of late 18th-century type of plough, with parts named, Fig. 4, p. 98.
23. Not noticed in *Archaeologia*, like much of the ironwork: Payne, Fig. 1, 16.
24. Small iron ox-goat tips have been found. As Payne remarks, these are almost indispensable to the agriculturalist, useless to the drover and pastoralist. Ox-tips (shoes) in the Collection may or may not be Roman; ox-ploughing was general in the middle ages and survived commonly until recent years. Now there is only one team still functioning in this country, Lord Bathurst's at Cirencester.
25. Payne, *op. cit.*, pp. 95-7. Karlsake, *Antiq. Journ.* XIII, p. 455ff.
26. I.e. mostly from the Silchester and Great Chesterford hoards. A possible Belgic example is from Twyford Down, near Winchester, but its associations are obscure. Payne, table p. 111. For possible use in viticulture see Rostovtzeff, *The Social and Economic History of the Roman Empire* (1926), Pl. X, note.
27. Spade-irons; Corder, *Arch. Journ.* C, p. 224ff. Forks: LVII, p. 247. Mowers' anvils: LIV, p. 143f., LVII, p. 247. Farrier's tools: LIV, p. 152, LVII, p. 248 (with comparative Fig. of batrice from Pompeii).
28. Iron-working technique: see (a) Gowland, LVI, p. 302ff.; Clark, *Prehistoric Europe: The Economic Basis* (1952) p. 199ff.; Coghlan, *Notes on Prehistoric and Early Iron in the Old World* (Pitt-Rivers Museum Occasional Papers on Technology, 1956). Slag occurred in the Claudian filling of the Belgic Defence, 1955. I am indebted to Mr H. H. Coghlan, F.S.A., for help with the question of ironworking and also with that of silver refining, dealt with below.

29. It may, however, have been used for smelting bronze, for crucibles and droplets etc. were found in it. The iron slag may have been tipped in with other rubbish to fill it when it had become disused.
30. LX, p. 469 and other discoveries not mentioned in *Archaeologia*. Not very common. Probably not used for hypocausts because of the soot, which was difficult to remove from the narrow wall-flues in any case. 'Coal in Roman Britain': Webster, *Antiq. Journ.* XXXV, p. 199ff.
31. In this connexion it is interesting to note that an iron chain from the great collection of 1st-century bronze and ironwork found at Llyn Cerrig Bach, Anglesey, was used for some time to haul lorries out of the mud. A Roman hook found in the Walbrook, London, was also put to modern use by the contractors working on the site.
32. Coghlan, *op. cit.*, pp. 148ff., etc. Many more analyses are needed, and the Silchester tools provide excellent specimens for this purpose. Such examinations scarcely affect the objects as museum specimens.
33. LII, p. 742; Evans, LIV, p. 139ff. The 'spokeshaves' are files: they have a saw-setting nick. The biting surface was taken for the imprint of cloth by Evans.
34. LVII, p. 246ff.
35. 1890: May, *The Pottery Found at Silchester* (1916), Pl. LVI, no. 104, p. 129 (though this is not, as stated, the vessel found in a kind of cist of pieces of chalk, omitted by May: it is the one which lay under the cist). 1900: May, Pl. LVI, no. 100 p. 128. The other vessel is also omitted. It is a colour-coated one-handle flagon with curvilinear designs in white. All these pots are typical of the second half of the 4th century.
36. *Arch. Journ.* XIII, p. 1ff. 96 articles. These are now to be seen in the Museum of Archaeology and Ethnology, Cambridge. There are many similarities in the contents of this and the Silchester hoards.
37. Forum, N. range, 1872 (*Journal*, August 24th, 1872): XLVI, p. 355.
38. Ch. 7, p. 161, and note 12.
39. A piece from the Baths drain, with nails, coins, and other rubbish; another piece from the Roman infilling of the Belgic ditch, 1954. The first is raw galena, the second partly smelted, such as can be picked up at Priddy and other Mendip sites of Roman working.
40. LIV, p. 221 and note b; Gowland on Ins. ix and xi finds, LVII, p. 113ff.
41. LXII, p. 327ff.
42. May, *op. cit.*, Pl. LXXIX and p. 192ff.
43. LX, pp. 156, 165ff.
44. LX, p. 158.
45. LX, p. 447ff., Fig. 7.
46. LVI, p. 236ff.
47. 1st century. Probably goat- rather than sheepskin: kindly examined and reported upon by Mr James McIntyre, F.S.A.
48. LIV, Pl. xlvii, p. 450; Fig. of a furnace, Pl. xlvii.
49. LIV, p. 459ff. Cf. A. Maiuri, *Pompeii* (Agostini, 1951), Pl. 86.
50. I am indebted to Dr Applebaum for this suggestion.
51. *Annales de la Soc. Arch. de Namur*, XXI, p. 198ff., Pl. II, top R. reproduced, De Maeyer, *De Romeinse Villa's in België* (1937), pp. 95-6 and Fig. The explanation, as far as the report goes, is speculative and there is no proof. The isolated hypocaust at Roncinnes is explained as an oast-house. It seems very large for this purpose, at least in comparison with the remainder of the installations suggested, and it lies right in front of the living-quarters of the villa over 150 yards from the 'brewery'. A similar isolated hypocaust in Insula xii has nothing to do with the Silchester furnaces.

52. *Anth. Pal.* IX, 368; *The Oxford Book of Greek Verse in Translation* (1938), no. 626. Julian reigned, 360-363.
53. The Chew Stoke finds produced evidence of the preservative qualities of tannin for metal objects.
54. LVI, p. 112ff.
55. Chew Stoke (Chew Park) again (as yet unpubl.): *Arch. Cambr.* 1938, p. 122f. etc.; see also p. 109, Pl. IIB. 'Hour-glass' mills: cf. *London in Roman Times*, pp. 109-10, Fig. 34.
56. The process of hand-spinning is roughly as follows. The carded wool is attached to the distaff, which is held under the arm, or in the hand. A thread is drawn from the mass and twisted, passed on to the other hand, and so wound on the spindle. The whorl acts as a kind of light fly-wheel to assist and regularize the rotary movement. Good thread or yarn depends on evenness in working.
57. LV, p. 421f. Counters made from sheep's shoulder-blades would exhibit a central layer of spongy bone. Singularly few counters from the site do in fact show this feature. The eyelets or washers were perhaps attached to cloth or leather, and the discs were waste.
58. LX, p. 161; illus., LXII, p. 101.
59. Calkin, 'Kimmeridge Coal-Money', *Proc. Dorset N.H. & Arch. Soc.*, LXXV, p. 45ff. The patera mentioned in the present text is a late, rare object; cf. *Segontium*, p. 145, Fig. 69, 1, for another associated with coins down to 350.
60. Two incomplete specimens (sole; blade and sole) Caerwent, Newport Mus.; LXII, p. 445; see also *Bowyer Jahrb.* 142, Pl. 52, Fig. 3: this is the best example. About 16, of more or less established antiquity, are known: Goodman, *Practical Education*, Feb.-May 1957.
61. LX, p. 154.
62. LIV, Pl. xlv, xlv.
63. LX, p. 155.
64. Rostovtzeff, *op. cit.*: take his Ch. VI with Ch. X, XI *passim*.

CHAPTER 9

1. Third edition, 1956.
2. *Roman Roads in Britain*, I (1955), II (1957).
3. Margary No. 4a, p. 76ff.
4. Cf. Chapter 1, note 34; it runs:

Item a Regno Londinio	mpm xcvi
Clausentum	xx
Venta Belgarum	x
Calleva Atrebatum	xxii
Pontibus	xxii
Londinio	xxii
5. LXI, p. 476. This is the only possible explanation.
6. FL IVL COSTANTIVS (sic) PERP AVG (blundered) - GLORIA REI PVBLICAE with Rome and Constantinople holding a shield inscribed VOT XXX MVLT XXXX; Mint: SMANF. Still in the possession of the finder, Miss Payne of Barossa Farm, Swallowfield, 1956.
7. Bannisters, Finchampstead. Cf. *Berks. Arch. Journ.* XXIX, p. 236.
8. Margary, *Antiq. Journ.* XIX, p. 53ff.
9. Margary No. 41a, p. 120f.: Crawford, *Man and His Past* (1921), p. 181ff. Routes 13 and 14 both give the distance from *Spinæ* to *Calleva* as mpm. xv. Route 14: Chapter 1, note 34. Route 13:

Item ab Isca Calleva	mpm cviii (sic)
Burrio (Usk)	viii
Blestio (Monmouth)	xi
Ariconio (Weston under Penyard)	xi
Glevo (Gloucester)	xv
Durocornovio (?Wanborough)	xiii
Spinis	xv
Calleva	xv

Corinium (Cirencester) has fallen out of the text.

10. Birch, *Cartularium Sax.*, 802; conveniently, *Berks. Arch. Journ.* XXIX, p. 207f. The road was sectioned to the SE. of Quaking Bridge in 1915.
11. *Antiq. Journ.* XI, p. 42ff., Pl. VIII.
12. ? = *hrynston* (corner-stone); P.R.O. Misc. Chanc. Bundle 11, 3; also in 1298, P.R.O. Duchy of Lancaster Forest Proc. I, 8 (Perambulations of Pamber Forest). I am indebted to Dr Crawford for this information. 'Dug up and scrubbed': information from Mr Fred Smith, custodian of the Calleva Museum.
13. Margary No. 4b, p. 89f. The 15th route runs:

Item a Calleva Isca Dumnoniorum	mpm cxxxvi (sic)
Vindomi	xv
Venta Belgarum	xxi
Brige	xi
Sorbiodoni	viii
Vindogladia (Woodyates)	xii
Durnovaria (Dorchester)	viii
Muriduno	xxxvi
Isca Dumnoniorum (Exeter)	xv
14. Thus further illustrating the remarks in note 34, Chapter 1.
15. Proved by field-work in 1956. The line is thus slightly different from that laid down on the maps, and the twisted course near Silchester can be discounted. Freemantle was where King John stayed on the occasion of his visit to Silchester in 1215 (p. 28 and note 5 to Chapter 1).
16. LXII, p. 331.
17. Grundy, *Arch. Journ.* LXXIV, p. 100.
18. And also for the sake of the extremely well-preserved length of this road a few miles further on in Bradley Wood.
19. Margary No. 42a, p. 81ff.
20. Winbolt, *Proc. Hants. Field Club* XV, p. 159; pp. 159ff. give a detailed account of this road and remains found near by, as at Sherborne St John mentioned in the present text. Latchmore Green: MacLaughlan, *Arch. Journ.* VIII, p. 235; opened by Challenor Smith in 1905 (whence the details), LX, p. 168 (Crawford, *Man and His Past*, Pl. facing p. 164). The remains lay 5-6 feet deep, the causeway having sunk in the clay, and been covered by clay wash from the stream. Rook's Down: MS. note by Challenor Smith; Morgaston Wood: *Proc. Hants. Field Club*, XIV, p. 241f.; the writer has also found pottery there.
21. Information from Mr Cottrill, who showed me the piece.
22. *Hants. Field Club*, XV, loc. cit.
23. In part, Margary No. 155, p. 71f. Blackmoor: *V.C.H. Hants.* I (1900), p. 340ff.
24. *Antiquary*, XXVII, p. 137.
25. Margary No. 160c, p. 150ff.; O'Neil, *Antiquity*, 1943, p. 188; *Berks. Arch. Journ.* XXIX, p. 233f.
26. XCIII, p. 46. *Tamesis* (on the analogy of the place-name *Abone* = Avon in *Antonine Itinerary*, route 14) may however merely be the river-crossing and not the name of the *town*, which seems to have been something based on the root DORCIC - retained in the modern name.
27. Cf. Richmond, *Roman Britain* (1955), p. 96; *V.C.H. Oxon.* I (1939), p. 294f.

28. LVIII, p. 32.
29. *Antiq. Journ.* XXXVI, p. 221.
30. LVII, p. 247, Fig. 4.
31. LVI, p. 124, Fig. 5.
32. Gaul, *Archaeologiai Ertanító* X, p. 97ff., describes remains of carts, etc. from burials of the Roman period at Somodor, Tétény, Sárszentmiklós and Nagylock. Since all the metal parts were found, reconstructions of the carts could be attempted: see his pp. 105, 118, 119, and 125. An incomplete list of the known specimens is given by Alföldi, *Ibid.* XLVIII, and v. Mercklin, *Jahrb. d.d. Arch. Inst.*, XLVIII. The present specimen is Alföldi's No. 18. V. Mercklin believes the objects are rein-holders, but this is unlikely, for they are not suited to this purpose, and also the iron shanks attached to some specimens are too massive.

Books

1. George C. Boon, *A New Guide to the Roman City Calleva Atrebatum at Silchester, Hampshire* (published by the Calleva Museum Trustees, 1954 etc.) gives a detailed itinerary of the visible remains and for its size is well illustrated. It can be obtained from the Secretary of the Calleva Museum Trustees, the Rectory, Silchester, near Reading, or from the Reading Museum.
2. I. A. Richmond, *Roman Britain* (Penguin Books, 1955) is the most recent general account of the period, and contains a useful bibliography.
3. M. P. Charlesworth, *The Roman Empire* (Oxford, 1951) and the same writer's *The Lost Province, Or, The Worth of Britain* (Cardiff, 1949) will help the reader to place Roman Britain in its proper perspective.
4. Tenney Frank (ed.) *An Economic Survey of Ancient Rome*, III (John Hopkins Press, Baltimore, 1937) though out of date in some respects still provides the best comparison between the economic life of Roman Britain (by R. G. Collingwood) and Roman Gaul (by A. Grenier, in French) and is valuable for a balanced appreciation of Roman Britain. O. Brogan, *Roman Gaul* (Bell, 1953) and P.-M. Duval, *La Vie Quotidienne en Gaule* (Hachette, 1952) give more general accounts of the sister province.
5. M. and C. H. B. Quennell, *Everyday Life in Roman Britain* (Batsford, 1952 etc.) is a useful and well-illustrated account of its subject; R. E. M. Wheeler, *London in Roman Times* (London Museum Catalogue No. 3, 1930) and *Antiquities of Roman Britain* (British Museum, 1951) are excellent for their accounts of objects. For pottery in general, see R. J. Charleston, *Roman Pottery* (Faber & Faber, 1955) and for coins, G. Askew, *The Coinage of Roman Britain* (B. A. Seaby, 1951).

For any study of Roman Britain, the Ordnance Survey's *Map of Roman Britain* (3rd ed., 1956, with introduction) is essential. The annual *Journal of Roman Studies* contains a summary of each year's work and discoveries.



INDEX OF PERSONS

ANCIENT

Atreates, 43*f.*, *passim*
 Catuvellauni, 46*f.*, *passim*
 Cogidubnus, 63
 Commius, 18*f.*, 45*f.*
 Cunobelinus, 47, 63
 Epatricus, 55

Eppilius, 19, 48*f.*
 Segontiaci, 35
 Tammonii, 101
 Tincommius, 19, 48*f.*
 Verica, 19, 48, 55*f.*, 63

MODERN

Allen, D. F., 18, 20, 48
 Applebaum, Dr S., 179
 Aubrey, J., 30
 Berry, Dr C. A. F., 138
 Birley, Prof. E. B., 19, 76
 Camden, W., 29*f.*
 Collet, Dr J., 31
 Cotton, Mrs M. A., 41, 50, 52, 66, 68
 Crawford, Dr O. G. S., 204
 Darwin, Dr C., 37
 Fox, Lady A., 20, 68, 138
 Fox, G. E., 38*f.*, 89, 149, 152, 154
 Geoffrey of Monmouth, 28, 35
 Gowland, Prof. W., 190
 Gwatkin, T. L., 24
 Halley, Dr E., 33
 Haverfield, Prof. F., 43, 71, 121
 Heame, Dr T., 30, 33
 Henry of Huntingdon, 34
 Hope, Sir W. H. St. J., 38, 41, 102
 Horsley, J., 33
 John, King, 28
 Joyce, Rev. J. G., 35*f.*, 77, 90, 99, 122, 155
 Karlake, Col. J. B. P., 38, 41, 72, 132, 178, 205
 Leland, J., 29
 Lyell, A. H., 170
 MacLaughlan, H., 32

May, T., 24
 Munro, Rev. H. H., 36
 O'Neil, B. H. St. J., 81*f.*
 Phillips, C. W., 16
 Pitt-Rivers, Gen. A., 38, 40*f.*
 Price, F. G. Hilton, 38
 Reid, Dr C., 170
 St. Joseph, Dr J. K., 16, 50
 Silchester Excavation Committee, the, 52, 134
 Smallcombe, W. A., 24
 Smith, Dr D., 154
 Smith, Fred, 38
 Smith, J. Challenor, 38
 Society of Antiquaries of London, the, 27, 37, 212
 Stair, J., 31*f.*
 Stephenson, Mill, 38
 Stevens, Dr J., 42
 Stukeley, Dr W., 26, 30, 33, 114, 214
 Toynbee, Prof. J. M. C., 130
 Walters, H. B., 41
 Ward, Prof. J., 31*f.*
 Wellington, 2nd Duke of, 35
 Wellington, 3rd Duke of, 38, 42
 Wellington, 7th Duke of, 15, 24
 Wheeler, Sir R. E. M., 40
 Wright, J., 32

INDEX OF BUILDINGS

(Italic figures refer to pages on which or opposite which illustrations appear. A key to the Insulae is shown on the folding plan.)

Amphitheatre, 30, 114*f.*
 Church, supposed, 49, 128*f.*, 128, 129
 Defences, 53
 'Belgic', 42, 50*f.*, *passim*
 Outer Earthwork, 21*f.*, 41*f.*, 50, 70*f.*, 132*f.*, 222

Defences, Outer Earthwork 'Annexe', 73*f.*, 177, 223
 Second Roman, 41, 74*f.*, 86
 Wall, 27*f.*, 33, 41, 51, 75, 84*f.*, 224
 Gates, 28, 33, 36, 70, 86, 86*f.*, 90, 122, 150

- Defences, sluice-gate, 88
 Forum-Basilica, 35, 67, 78, 90*ff.*, 91, 95, 225, 229
 Houses and Blocks (see also Index of subjects):
 I, 1, 36, 229
 I, 2, 178
 II, 1, 155, 229
 II, 2, 163
 III, 1, 138, 161
 V, 1, 229
 V, 2, 222
 V, 23, 150
 VI, 1, 222
 VI, 2, 138
 VI, 21, 222
 VI, 22, 229
 VIII, 1, 139, 140, 142*f.*, 148
 VIII, 4, 190
 IX, 2, 229
 IX, 3, 67, 69*f.*, 229
 IX, 21, 138
 IX, 23, 197
 X, 26, 193
 XI, 21, 197
 XII, 2, 138
 XIV, 1, 124, 140, 140, 143, 150, 152*f.*, 155, 157, 178
 XIV, 2, 124, 140, 143, 157, 164, 178
 XV, 1-3, 229
 XV, 23, 143
 XVI, 1-3, 229
 XVII, 3, 229
 XVII, 22, 138
 XVIII, 1, 229
 XVIII, 2, 140, 229
 XVIII, 3, 138, 142, 229
 XVIII, 21, 229
 XVIII, 24, 227
 XIX, 2, 141, 143, 153*f.*, 163, 178, 231
 XX, 28, 229
 XXI, 3, 229
 XXII, 1, 229
 XXIII, 1, 143, 149, 156, 178*f.*, 231
 XXIII, 2, 67, 139, 139, 141, 152*f.*, 229*f.*
 XXIV, 1, 141
 XXIV, 2, 139, 141, 229*f.*
 XXVI, 3, 139, 229
 XXVII, 1, 137, 140, 142, 150, 157, 164, 229
 XXVII, 2, 153, 179, 229
 XXVII, 21, 51, 141
 XXVIII, 1-3, 22, 229
 XXXI, 1, 180, 222
 XXI, 3: 120
 XXXII, 1, 70, 137, 164, 229
 XXXII, 2, 229
 XXXII, 3, 70, 120, 138
 XXXII, 23, 138
 XXXIII, 4-5, 26, 137, 142, 229
 XXXIII, 23, 179
 XXXIV, 1, 136*f.*, 141*f.*, 148*f.*, 179, 222, 227, 229
 XXXV, 1, 229
 Kilns, 191
 Mansio, 116*ff.*, 227
 Public Baths, 48, 51, 67, 69, 79, 101*ff.*, 103, 119, 230
 Streets:
 plan, 41*f.*, 52, 66*f.*, 69*ff.*, 74
 description, 32, 71
 VI-XXXI, 70*f.*, 119, 222
 X-XVIII, 70
 XIII-XXX (main E.-W.), 69, 70, 73
 XX-XXXII, 69, 70, 222
 XXII-XXXV, 71
 XXIV-VIII (main N.-S.), 73
 XXVI-XXII, 70
 Temples:
 VII (polygonal), 35, 37, 69, 122*f.*, 227*f.*
 XXX (*temenos*, 2 square in), 69, 119*f.*, 230
 XXXV (square), 49, 69, 121*f.*, 122, 230
 XIV (*lararia*, supposed), 124
 XXI (mystery-shrine, supposed), 123
 Nymphæum, supposed, 124
 XXXVI, possible, 123*f.*

INDEX OF SUBJECTS

- Agriculture, 175*ff.*; see also *territorium*
 buildings, 178*f.*
 cattle, 176*f.*, 233
 corn-dryers, 179*f.*
 Agriculture, crops, 175*f.*, 179*f.*
 implements and tools, 177, 180*ff.*, 183, 185, 187, 234
 Barrels, 159, 232

- Bathing, method of, 102 *f.*
 Bronze objects, *passim*
- Calleva, characteristics of, 64
 connexion with Carausian episode, 77 *f.*
 economy of, 174 *f.*
 end of, 80 *f.*
 foundation of, 49 *f.*, 174
 identification with Silchester, 33 *f.*
 layout of, 222; *see also* Index of Buildings
 Old Town, 66 *f.*
 New Town, 70 *f.*
 meaning of the name, 26
- Callevans, characteristics of, 64; *see also* Atrebatas
- Capitals (Basilica), 28, 80, 94, 97
- Cemeteries, 132 *f.*, 229
- Coal, 182
- Coins, British and Gaulish, 18 *f.*, 46, 46, 48, 55 *f.*, 219
 with Callevan mint-mark, 46, 49
 found at Silchester, 56 *f.*, 66, 78
 mint equipment, 56
- Roman, *passim*
 'Carausius II', 79
 copies, 57, 80, 222
 general account of, 221 *f.*
 hoards found at Silchester, 40, 77, 79, 149, 223, 230
 Justin I or Justinian, 80
 total, recorded finds, 80
 used as evidence, 36 *f.*, 67, 75, 108, 123
- Collegium Peregrinorum*, 76, 121, 223
- Counters, 115 *f.*
- Cropmarks, 29 *f.*, 32, 32, 39, 71, 206, 215
- Dice, 115
- Drains, 71, 93, 110 *f.*, 155, 161, 227
- Dykes, defensive or boundary:
 Silchester, 61 *f.*, 220
 Grim's Bank, Padworth, 28, 81 *f.*, 177
 Greenham, Aldworth, 82
- Excavations:
 characteristics of the old, 27, 35 *f.*, 212
 dating from archaeological evidence, 43 *f.*
 why the old covered in, 39, 213
- Figurines:
 bronze, 126 *f.*
- Figurines:
 Eagle, Silchester, 78, 96, 99 *f.*
 Flute-player, 96, 126
 Horse, Silchester, 25, 61
 Lar, 124 *f.*
 Paterfamilias, 96, 124 *f.*
 Clay (Venus, Mother-goddess, cockerel), 126
- Food, 166, 170 *f.*
- Furniture, 162 *f.*
- Gardens, 170 *f.*
- Garrison, 88 *f.*
- Gems, engraved, 126 *f.*
- Glass, 80, 97, 162, 168 *f.*; *see also* under Houses.
- Houses; *see also* Index of Buildings:
 alignment with streets, 66 *f.*, 136, 138 *f.*
 list of those not conforming to street-plan, 229
 early timber, with or without flint footings, 135 *f.*
 later, 138 *f.*
 plans, 135 *f.*
 total of, presumptive, 134
 upper storeys, question of, 141 *f.*
- Houses and buildings, constructional details etc.:
 baths in XIX, 2, 141
 ceilings, vault, 148 *f.*
 doorways, locks, keys, 142 *f.*, 147
 floors, 151 *f.*
 chalk, clay, gravel, 151
 mosaic, 80, 102, 123 *f.*, 128, 152 *f.*, 154 *f.*, 157
 opus sectile (wrongly called), 156
 opus signinum, 105, 120, 151
 tessellated, 93, 97, 121, 137, 151
 tile or brick, 106, 137, 151, 156
 wooden, 151
 heating, braziers, 157
 fireplaces, 157
 hypocausts, 81, 102, 106 *f.*, 110 *f.*, 117, 157, 158, 227
 kitchens and equipment for, 163 *f.*, 172, 233
 latrines and sanitation, 48, 107 *f.*, 117, 161
 roofs, tile, stone, thatch, 146 *f.*
 false domes, supposed, 120
 pitch of, 96, 146
 antefixes, 135, 146 *f.*, 148
 strong-room, -box, 149

- Houses, constructional details etc.:
 walls, 120, 122, 135*ff.*, 141
 timbers and daub from, 136*f.*
 wall-decoration, frescoes, 97, 120, 124,
 128, 141, 149*f.*, 151
 mosaic, 109
 veneer (marble, porphyry), 97, 120,
 150*f.*
 windows, window-glass, 97, 109, 145*f.*
- Imported objects found at Silchester,
 197*ff.*
- Industries, 174; *see also* Agriculture,
 Trades
 baking, milling, 193*f.*; *see also* Kitchens
under Houses.
 bone-working, 195
 brewing, possible, 193*f.*, 235
 bronze-working, 188
 cloth (spinning, weaving etc.), 194*f.*,
 236
 dyeing, possible, 193*f.*
 glass-making, 146
 iron-working, 182*ff.*
 lead-working, soldering, 161, 188, 232
 pottery-making, 191*f.*
 shale-working, 162, 195
 silver-refining and working, 56, 187*f.*
 stone-cutting (porphyry), 197
 tanning, 192*f.*
- Inscriptions, *passim*; *see also* Literacy
 'Calleva Stone', 34, 81, 223
 Forum, dedicatory, 192
 Ogham stone, 80*f.*
 Stair's (1744), 34, 34*f.*
 stamped tile (Nero), 108, 226
Tammanii, stones recording, 34*f.*, 101,
 226
 from Temple, Insula XXXV, 76, 121,
 223; *see also* *Collegium Peregrinorum*,
 and 'Calleva Stone'
- Ironwork, 183, 185, *passim*
 and iron terminal, Belgic, 61
 gridiron, 164
 hoards of, 180, 186*f.*, *passim*
 pothooks, 164, 166
 plane, 183, 196
 tires, 210
 tools (carpenter's, smith's etc.), 180*ff.*,
 183, 185, 196, *passim*
- Jewellery (brooches etc.), 80*f.*, 82, 111,
 112, 113
- Journal, Rev. J. G. Joyce's, 96*f.*
- Leather objects (shoes, garments), 159,
 193, 235
- Legends (Onion, Imp Stone etc.), 29,
 204, 215
- Lighting (lamps, candlesticks), 120, 157*f.*
- Literacy and writing, 64, 65, 213, 221
- Local government, 100*f.*
- Military remains, 89, 90
- Museums:
 Calleva, 214
 Reading, 42, 115
 site (old), 42
- Parish Church, 26, 120*f.*
- Pets, 172*f.*
- Pewter and white-metal objects, 161, 165
- Pottery:
amphorae, 167
 Arretine, 58*f.*, 59, 220
 Belgic, 59, 60*f.*, 220
 coarse Roman, 132, 165*ff.*, 169, 202
 feeding-bottle, 168, 169
 Jubilee pot, 165
mortaria, 166, 169
 Rhenish, Castor and New Forest, 97,
 168, 169
 Samian, 60, 97, 168
 used as evidence, 52*ff.*, 67, 75, 80
- Querns or handmills, 167; *see also*
 Industries (baking, milling)
- Religious remains, 125*ff.*, 127, 130*f.*;
see also Inscriptions, Statuary, Temples
 Christian leaden sealing, 130*f.*, 131
 Gnostic gem, 126*f.*
- Retail trade, shops, 174, 196*f.*
- Roads:
 Alchester, 209*f.*
 Chichester, 208
 London, 201*ff.*
 Old Sarum, 205*f.*
 St Albans, 208*f.*
 Speen and the West, 203*ff.*
 Winchester, 206*ff.*
 Connexion with 'Belgic Defence', 53,
 68
- Saxon objects, 80, 83, 224
- Silchester, meaning of the name, 26
 old plans of, 30*ff.*, 32
 prehistoric remains from, 218*f.*
 situation of, 26*f.*, 49*f.*, 53

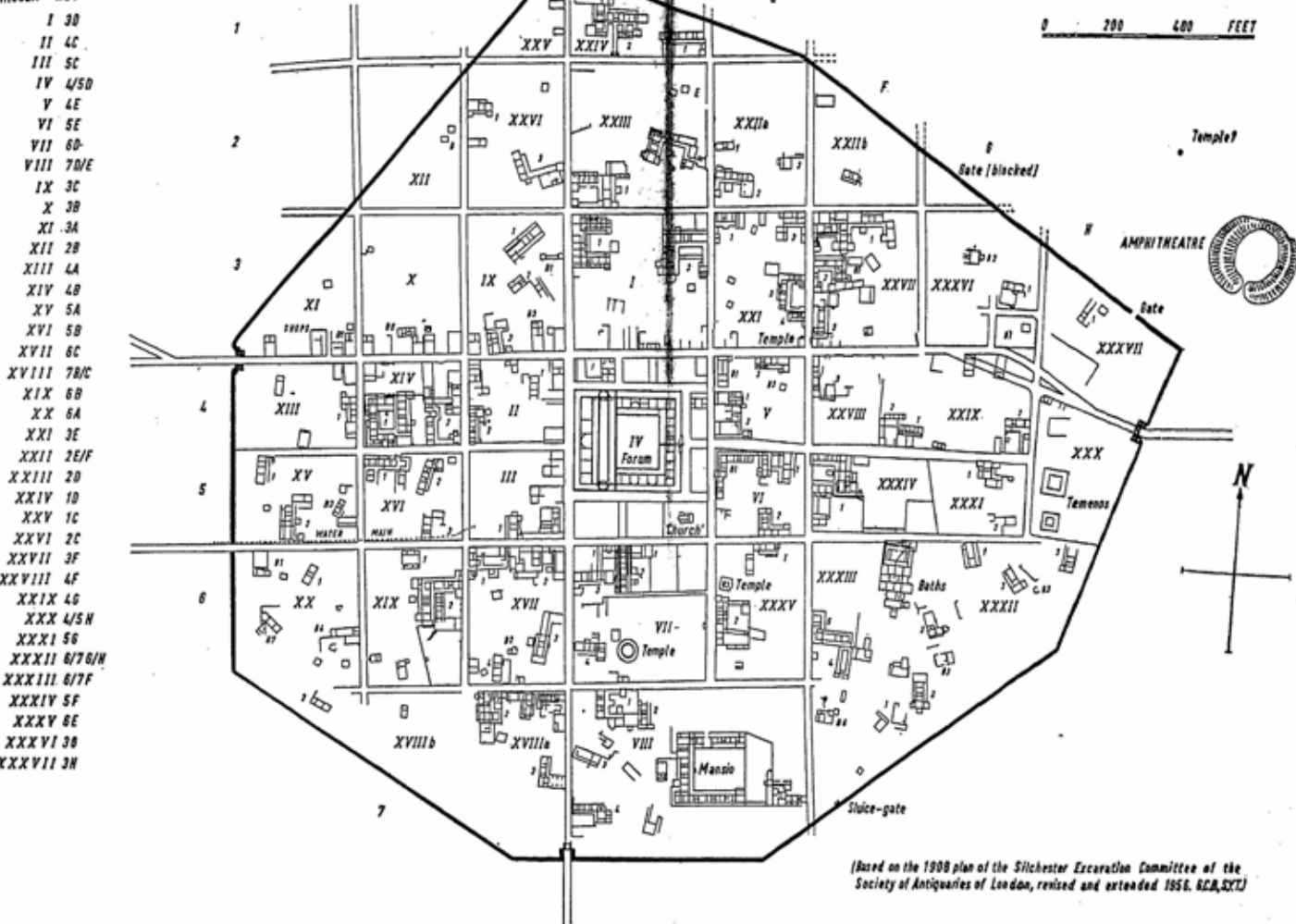
- Silchester Collection, the, 24, 42, 214,
217, *passim*
- Statuary:
Imperial, bronze, 98
pedestals for, 98*f.*
Serapis, head of, 28, 31, 123*f.*
from Temple XXXV (Marsetc.), 121*f.*
Tutela, 78, 98
- Stone-robbing, 28
- Surgical instruments, 104, 105
- Territorium*, 82, 177*f.*
- Toilet articles, 104, 105
- Toys, 116
- Trades, 196; *see also* Industries
- Transport, 209*f.*
- Waste, disposal of (rubbish-pits etc.), 161
- Water supply (wells), 50, 158*f.*
force-pump, 158*f.*, 160
wooden main, 161
- Weights and measures, 139





0 200 400 FEET

I 30
II 4C
III 5C
IV 4/50
V 4E
VI 5E
VII 60-
VIII 70/E
IX 3C
X 3B
XI 3A
XII 2B
XIII 4A
XIV 4B
XV 5A
XVI 5B
XVII 6C
XVIII 7B/C
XIX 6B
XX 5A
XXI 3E
XXII 2E/F
XXIII 2D
XXIV 1D
XXV 1C
XXVI 2C
XXVII 3F
XXVIII 4F
XXIX 4E
XXX 4/5N
XXXI 5B
XXXII 6/7F/N
XXXIII 6/7F
XXXIV 5F
XXXV 6E
XXXVI 3B
XXXVII 3N



(Based on the 1908 plan of the Silchester Excavation Committee of the Society of Antiquaries of London, revised and extended 1956. GCM:SYT)



✓

Archaeology → (England)

Galt
N^o 175

CENTRAL ARCHAEOLOGICAL LIBRARY,
NEW DELHI

Borrowers record.

Catalogue No. 913.427/Boo-6925

Author—Boen, George C.

Title—Roman Silchester: Archaeology of
a Romano-British town.

Borrower No.

Date of Issue

Date of Return

"A book that is shut is but a block"

CENTRAL ARCHAEOLOGICAL LIBRARY
GOVT. OF INDIA
Department of Archaeology
NEW DELHI.

Please help us to keep the book
clean and moving.

5, 2, 148, N. DELHI.